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ARMENIAN OR AMERICAN HEROES: THE UNIVERSALITY OF AN ARCHETYPE

by

© MIREILLE KALFAYAN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Armenian or American Heroes: The Universality of an Archetype" submitted by Mireille Kalfayan in partial fulfillment for the degree of Master of Arts.

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ABSTRACT

The present study was based on Carl Jung's theory of the collectivity of the unconscious and the universality of archetypes. It was designed to explore the responses of individuals to archetypal suggestion. Two experimental groups were exposed to one Armenian and one North American folk myth. Two controls were given neutral tests and one control was not given stimulus materials.

It was expected that the two experimental groups would become more sensitive to archetypal elements in stimulus materials and so would react more symbolically to response materials in designed tests. In contrast, the control groups, which have not had any intense archetypal suggestion, would then respond on a more concrete-functional level. The tests used were: (1) the tachistoscope test, (2) the detection test, (3) the sorting test, (4) the drawing completion test, and (5) the drawing association test.

The hypotheses were partially confirmed and results analyzed qualitatively. It was concluded that the groups exposed to archetypal stimuli were richer in production of abstract symbolic images than the control groups. Results were discussed in terms of the universality of archetypes and methodology.

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I would like to present my respects to the good "spirits" who have initiated me on this search and assisted me through my tasks.

First, I would like to remember my father who taught me in symbolism, during his lifetime and whose spirit led me to grope the collective unconscious, after his death.

Secondly, I wish to express my gratitude to Dr. Paul Swartz for being there, to guide and direct me to this project and especially to give me the motivation and confidence, through its development, to perform to my fullest.

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INTRODUCTION

"What is the core of us? What is the basic character of our being?"[1] These are the eternal questions that have intrigued man from the beginning of time. From the Greek classics, such as Sophocles, Euripides and others, to the existential philosophers of our century, writers and thinkers have attempted to discover the inner recesses of man's being, the dynamics of Human Psyche - what Jung has called the Archetypes.

These are the psychological traits that are common to man wherever he lives, just like certain of his physical traits; primordial "patterns of behavior"[2] which make man "specifically human and no man is born without it."[3] Archetypes, says Jung, "are the great decisive forces, they bring about the real events"[4] but he adds, they also represent "a spiritual goal toward which the whole nature of man strives."[5]

An archetype then represents both the motivating energy and the goal of life itself; a "living psychic force"[6] which emerges from the vast depths of the collective unconscious, a nondifferentiated state of universal world entity, where "les extrêmes se touchent,"[7] and which gets "connected with the living individual by the bridge of emotion;"[8] "ainsi lorsqu'on associe librement sur une même forme, sur une même image, on a l'impression d' être livré à un hasard subjectif sans limites et on ignore que, chez le voisin,

l'inconscient conduit, pour les mêmes raisons, aux mêmes formes."[9*]

The images that spring from the unconscious will be expressed in the objective world through different experiences, states Jung: "the first possibility of making use of them is artistic, if one is in any way gifted in that direction; a second is philosophical speculation; a third is quasi-religious, leading to heresy, the founding of sects; and a fourth way of employing the dynamics of images is to squander it in any form of licentiousness."[10] Traces of the archetypes will then be found in works of art - paintings, music, literature and specially in myths and fairy tales. "Myths," Joel Covitz says, "are both rooted in the psyche, or what tradition has called the soul, and they are also reflections in the soul of the world's experience."[11] They are "an expression of the psychological archetype at a certain cultural level."[12] But also, writes Esther Harding, "the fact that equivalent myths and rituals are strikingly similar, even as to detail, in the cultures of widely separated peoples, indicates that they represent 'general' psychological themes which are true of humanity no matter where."[13] Even if themes are believed to have migrated from nation to nation, the universality of these themes is still meaningful for the fact that they must have "struck a cord" to the borrowing nation, that is, they must have presented a genuine response to the needs of its collective unconscious and therefore "the theft must have been carried out in the dark shadows of a handful of archetypes."[14]

---

*"Therefore, when we associate freely or the same form or the same image we have the impression to indulge in a subjective hazard without limits and we ignore that, with the neighbor, the unconscious leads, for the same reasons, to the same forms."

A myth has therefore two meanings; "its larger significance for the history of human thought and phantasy and its more restricted meaning and function for a particular tribe."[15] The archetype exists then on two levels; in a deeper total "form" in the unconscious and in a projected manifest symbolic "content" in consciousness. In its primary state, the archetype will follow a universal pattern in all cultures but, in its secondary reproductions in the different cultures, will bear the character and content of those cultures. Just as paintings and poetry, about nature for example, depict it in different ways in various landscapes but the underlying emotions they stirred in the artist and awake in the appreciator stay the same - awe, peace... - so is it in myth; the hero assumes "the national character of the civilization in which he originated and have been kept alive"[16] but, in his life history, shares universal features with counterparts in other nations. He represents the universal human figure who strives to achieve his identity and bring it to complete wholeness - the answer to man's existential condition.

Comparative studies of hero myths in various cultures have been aimed to reveal those common laws of human existence and the universal pattern of all life adventures. Four approaches have been taken to explain what is called "the voyage of the hero." (See Appendix A for the description of this voyage.)

In The Origins and History of Consciousness, Erich Neumann analyzed the nature of the hero as "the archetypal forerunner of mankind in general. His fate is the pattern in concordance with which the masses of humanity must live, and always have lived" (p. 131).

In The Hero With a Thousand Faces, Joseph Campbell summarized the standard path of the hero's adventures into a "monomyth unclear unit" of separation-initiation-return. "A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man" (p. 36).

In Winnebago Hero Cycles, Paul Radin distinguished four cycles in the evolution of hero myths: "the Trickster cycle, the Hare cycle, the Red Horn cycle, and the Twin cycle." He recognizes development from a least developed animal figure to a founder of human culture unto an archetypal hero figure and then unto a state of permanent rest. In Heroic Song and Heroic Legend, Jan DeVries expounded a ten motifs pattern of heroic life divided into three sections of birth-youth-return or death.

Other studies explored the pattern Campbell identified as the voyage of the hero. We find examples of this in analysis of hero myths of different nations (Mythology, by David Adams Leeming) and in treatment of heroic poems from literature (Hero's Way, by John Alexander Allen).

The fact that literature abounds with borrowings of myths from foreign nations (Phèdre, Antigone...) has suggested the presence of universal literary symbols. In this connection, a close link also has been made between mythology and other artistic expression (Botticelli's Birth of Venus, Yeats' Leda and the Swan...) pointing further to archetypes as a common source of creative energy.

Interpreting the meaning of those formed images to their archetypal core, requires an understanding of symbols - a knowledge of archetypes and the significant images associated with them in a certain culture or individual. There has been an evergrowing interest in the nature and meaning of symbols, starting with Freud's, Interpretation of Dreams in 1900 and continuing at a deeper level with Jung's, The Psychology of the Unconscious (1916). Analytical interpretations of myths and fair tales have been formulated by Jung (1969) and his followers, among them; Henderson (in Jung's, Man and His Symbols, 1964); Von Franz (1973); Mindell (1973); Bach (1973); and Roques (1971). Attempts at symbolic interpretations of literature have been made by Frye (1963) and Bodkin (1961); of music, by Donington (1963) and Gille (1964); of art, by Gombrich (1972); of philosophy, by Wilhelm (1962); of religion, by Jung (1972) and Sandner (1972); and of other endeavors, by Durand (1969), McCully (1971), and Thass Thienemann (1968).

There has been amassed a great fund of clinical and empirical investigations of symbolism by Jung and his followers. Most of this appears in edited form in Jung's last book, Man and His Symbols: a volume which explains and illustrates the theory of the importance of symbolism in dreams, myths, therapy, visual arts, and perhaps surprisingly, science. Other materials are in the hands of members of the Carl Jung Foundation for Analytical Psychology which continues the studies of Jung into the symbolic in children's drawings, analytical studies, projective techniques, and the visual arts.

Finally, there is an International Society for the Study of Symbols, incorporated in 1963, which is also directing interpretations

toward the further understanding of symbols and has contributed research, theoretical and historical informations about Symbology.

Other research studies are based on the orthogenetic princple of development in comparative studies of children, psychotics, and primitive people (Werner, 1948). Jung was the first to note the great similarity of themes in the dreams of normal people in primitive Asian, African, South American societies; products of psychotic fantasy and ancient myths and rituals. In Essays on a Science of Mythology (1963), he provides rich comparisons between dream contents of schizophrenics and ancient rituals and mythical figures. In Mandala Symbolism (1972), he points out to remarkable coincidences between patients' drawings and ancient mandala motifs.

Following Jung's lead, Kellogg interpreted a collection of 1,000,000 drawings and paintings of children from 30 different countries and found a prominence of "Mandalas, Suns, and Radials" in the early drawings of these children (1968). However, Cambier and Titeca (1970) analyzed drawings of trees and persons by older children of 8-10 years of age from five different nationalities and came to a different conclusion. German, Belgian, French, Italian, and Dutch children's drawings were compared on the basis of "pression du tracé," and a great difference was found between nationalities in the case of person drawings. However, there was virtually no difference in the tree drawings. Another cross cultural study of fruit-tree drawings by 5-12 year old children from 24 countries (Adler, 1968) showed through test and retest procedures that more than half of the drawings fell in a category corresponding to the primordial image of the apple tree.

Kellogg (1969) describes the artistic development of children and again attempts to show the similarity of child art and designs of archaic adults. The conclusions correspond to an earlier and similar study by Eng (1959), which pointed out the common features between children's drawings and primitive folk art. Eng claimed the chief difference was that the child draws human beings and the Stone Age artist animals. Both were considered to have the same character - formalism, transparency, turning-over and "based on features common to the psyche of the child and primitive man" (p. 213). We might also mention Sarnoff (1969) who analyzed a random assortment of stone carvings. He believed he had sufficient data to point towards a "bi-sexual snake symbolism in Mayan Bas Reliefs" (p. 5).

Rennert and Mode (1969) compared monsters in ancient and modern art with drawings by schizophrenics and found similar characteristics in both cases, of representation as "mixed-being" - half human and half animal.

Billig (1970) compared drawings of North American schizophrenic patients with those of patients of other cultures - Kenya, Hong Kong, Japan, Lebanon, and Chile. Universal changes in the spatial structure of the drawings - transparency, vertical projection, "perspective tordue" - were found. Billig says that "the development of structural patterns suggest a common nucleus for experiencing reality regardless of cultural background and in the manner by which schizophrenic thinking is structured." The analysis of schizophrenic's scribbles by Enachescu (1969) also revealed a certain evolution in the "expression grapho plastique" of these patients closely related to the clinical dynamics of their psychoses.

A number of studies in symbolism bearing particularly on Jung's theory of universality of archetypes have been explored by Melhado (1964) with normal and psychotic people. He conducted five studies based on Jung's concepts of symbolism, two of which used projective drawing techniques and three of which were basically sorting problems, and concluded that his study supports the Jungian concept about the collective unconscious.

Laboratory types of research has also been undertaken. An experimental study of "Symbolic Representation in Schizophrenia" (Goldman, 1960) obtained great agreement among normals in moods associated to line drawings - positive effects to circular, light and upward lines; and negative to angular, dark and downward lines - but less among schizophrenics. The schizophrenics tended more to relate the symbol with two divergent referents. Michael Fordham (1970) found this same tendency of nondifferentiation of affect with children. This suggests that it is at these primary unconscious levels that the archetype is most intensely experienced in its totality. At higher levels of consciousness, the archetype becomes split into its polarities and displaced into abstract symbolic images. But the great agreement of symbolic contents among normals still suggests the work of an archetype in secondary contexts.

Other experimentations with symbolism has been conducted to explore the universality of symbolism. Levy (1954) used fifth grade children, asking them to match Freudian sexual symbols with male and female names, and could not find any significant evidence for the existence of universal sexual symbolism. But Starer (1955) investigated Levy's hypothesis with male and female psychotics and normal

student nurses and asked them to assign male and female names to elongated and rounded figures. In contradiction to Levy's data, his study resulted with significant trends with both psychotic and student nurse populations and confirmed that "there is such a phenomenon as a symbolism which is generally accepted in any particular culture." Stennett and Thurlow (1958) revised the Levy and Starer experiments with psychotics and university students using the same procedure and decided that the source of discrepancy, in the hypothesis of a universal sexual symbolism, was the age variable.

In a like vein, Jones (1961) studied the sexual symbolic response of prepubescent and pubescent children to abstract figure variations of circles, pyramids and rods and found great discrimination of sexes in four-year prepubescent children as with the adults in the prior studies, but decreased discrimination by puberty. Barker (1957) experimented on "pre-latency," "latency," and "post-latency" children with sexual symbols of different degrees of cultural significance and found no significant differences between the three groups. She interpreted the data "as indicating that the cultural meaning is a relevant determinant of children's perception of sexual symbolism."

In approaching the problem of sexual development, Lessler (1962) used two different types of sexual symbols - "structured," round and pointed objects and "unstructured," rough and soft objects. He found significant agreement among different sex and age groups for the "structured" symbols and no agreement for the "unstructured." Differences were explained in terms of anatomical vs. cultural

differences. Later studies pointed also to the validity of cultural differences in Freudian sexual symbolism. Melkonian (1965) did a cross-cultural replication in Lebanon of the Levy-Starer experiments and found no support for the Freudian theory of the universality of sexual symbolism. Likewise, Richardson (1971) worked with Swedish, Chinese, Negro, and Caucasian samples of population and found that the identification of Freudian sexual symbols varied from culture to culture.

The universality of Freudian and Jungian sexual symbols was examined further by Mullen (1968) in terms of the power of prediction of their gender in three different languages - French, German, and Spanish. A greater, although not significant, conformity of gender was found with the Jungian sexual symbols rather than with the Freudian, across the three languages. Althouse (1970) investigated an F-M semantic differential scale of Freudian and Jungian sexually symbolic concepts and found subjects rated masculine concepts from both Freudian and Jungian symbols in the expected direction but were not as consistent with feminine concepts. These results were discussed in terms of influences of socio-cultural, national, and language variables. Another semantic differential study of psychoanalytic sexual symbolism was carried out by Archer and Burgess (1970) and showed discrepant items between the Total scale and F-M scale and also between each of these two scales and psychoanalytic theory. However, Goldfried's and Kissel's (1963) semantic differential ratings of animal symbols (alligatory, ape, butterfly...) by preadolescent males and females partially confirmed the "universal" interpretation of some of these symbols.

Other studies of symbolism investigated the meaning of the

yin-yang symbol. In one, Craddick, Thumin, and Barclay (1971) used the semantic differential scale with males and females to explore the meanings of the symbol (presented in green and blue instead of the original black and white), as related to Jung's concept of archetype, and found a great agreement with both sexes in the connotations it elicited, which were "quite positive or favorable in nature" and, most remarkable, were perceived as both masculine and feminine - consistent with Jung's concepts of anima and animus. Other more spontaneous associations to the yin-yang symbol (as to a Rorschach card) were observed by Baudouin (reported by Aigrisse, 1963) to evoke the same themes and reactions and surprisingly coincide with its primordial significance in taoism.

The symbols of Anima and Animus have been analyzed by Bash (1972) in the projection of M responses of neurotic and normal males and females to the Rorschach test. The hypothesis that neurotics would give more human movement responses of the opposite sex to Rorschach cards, because of an increase in projection, was confirmed and further led to the discovery of interesting parallels between the sexual attribute of M responses of healthy males and neurotic females on the one hand and neurotic males and healthy females on the other.

In a study of music, Nelson and Herczeg (1972) used Donington's archetypal analysis of Wagner's music to investigate the number of correct identifications of the musical themes with their verbal descriptions and found significant results, consistent with Jung's theory of universality of archetypes.

Other studies, dealing directly with myths, have originated with Bartlett's experiments (1932) and outside the Jungian context; the orientation here was to uncover the principles of remembering and forgetting using a North American Indian folk tale as a structured stimulus. He reported that the theory underwent conspicuous transformations in repeated reproductions. This is consistent with the theory of myth on the surface. Allport and Postman (1971) studied the dynamic principles of rumor transmission and found that items most frequently retained were those of special interest to the subjects. Other experiments, using the tachistoscope to explore the selective factors in perception (Postman, Bruner, & McGinnies, 1965), report that personal values were determinants of perception (and memory). Other studies, requiring short-term memory tasks, have used symbols to discern the dynamic code of retention. Brodie and Lipman (1970) used two kinds of symbols - arabic numerals and "spelled-out" numbers - and found better recall with the AN and the SON symbols. Chalupa and Dornic (1970) used three kinds of symbols - 2 digit numbers, 2 letter words and clocks showing different times - and found best recall with numbers and least with clocks.

Irving rephrased a statement by Bartlett to say:

> "Distortions and elisions in the reproductions revealed the organizing influence of subject's schemas: insofar as the subjects did not possess the appropriate schemas to deal efficiently with the story in reproducing it they altered it in line with their available schemas," (p. 9).

And basing his study (1959) on Bartlett's myth "The War of the Ghosts," explored explication and familarity as organizing principles in serial

reproductions. He found out that the original version of the story was least well reproduced, and the familiar version best reproduced. Ramnoux, as reported by Aigrisse (1963), using a celtic legend with her students, found three periods in their serial reproductions of the legend: (a) an attempt for actualization of the story; (b) an effort to moralize; and when asked to redo a coherent story from the remaining elements, (c) a spontaneous rediscovery of all "fils conducteurs." Moreover, Yates, studied the Art of Memory in the Middle Ages (1966) and reported that materials to be remembered for speeches were ordered by the lecturer in an integrated pattern around archetypal ideas.

It seems possible then, that immersion in a myth will constellate, by predisposition, all succeeding experiences of memory and perception around those archetypes inherent in that myth and all artistic expression as symbolic of those archetypes. Based on these premises, a study was designed to test the hypothesis that exposure to two different national myths, similar in archetypal content, will make subjects more sensitive to archetypal elements in stimulus materials and so react symbolically in contrast to control subjects who will have been exposed to neutral texts (that do not contain any archetypal symbolism) or to those who have not been exposed to any story. More specifically, it is expected that the expression of archetypes will be found in (a) threshold awareness of symbolic content, (b) memory for drawings, (c) sorting of archetypal categories, (d) drawing completion of archetypal drawings, and (e) drawing-association to drawings.

METHOD

Subjects

Seventy (70) students from the introductory psychology courses at the University of Alberta served; the participation was in partial fulfillment of experimental requirements for the course. They were randomly assigned to five groups, two experimental (E1 & E2) and three control (C1, C2, C3), with an equal number of males and females in each group.

Materials

Verbal (printed and auditory) and visual stimuli were used with groups E1, E2, C1, and C2. The basic stimulus materials were two folk myths; one Armenian and one North American, expressing the universal Hero archetype on two different national perspectives (See Appendix B). From each myth, two excerpts analyzed to be basically equated in archetypal content, were chosen to represent successively the archetypes of "The Birth of the Hero" and "The Conquering Hero" (See Appendix C). Two control groups were given a neutral stimulus text. The two excerpts in the control groups were comprised of two Ogden Nash poems (1868 & 1945), devoid of any archetypal element but interesting enough to keep the subjects involved with the story. Excerpts differed in length within each group, but were equated in total length over all four groups (See Appendix D). The myths and poems used with groups E1, E2, C1, and C2 were put on tapes by a male

student in the Drama Department at the University of Alberta.

The excerpts were also presented as printed versions. All printed versions had various words selected by the author emphasized by underlining, as shown in Appendix D. The underlined words consisted mostly of nouns in all printed versions but they represented equivalent archetypal images in the two myths and were randomly chosen in the poems.

Secondary stimulus materials accompanied the myth excerpts and poems. In all cases visual illustrations accompanied the excerpts in the form of pencil reproductions of drawings found in relevant texts (Zaryan, 1966; Felton, 1954; Nash, 1933). The illustrations were selected by the author as most appropriate to the verbal stimuli; these are reproduced in Appendix E.

Forty-two (42) symbols were used as secondary level stimuli. They were designed to be correlated to the words underlined in the printed versions. These association-symbols were adopted from Rudolf Koch's The Book of Signs (1965). Koch collected the originals from manuscripts and inscriptions, ranging from ancient times up to the Middle Ages. All were made up in black felt pen by the writer and are reproduced in Appendix E. However, these were given to the two experimental groups (E1 & E2) but only one of the three controls (C1), unlike the illustrations which were given to E1, E2, C1 and C2. The second group (C2) received instead of the map of symbols two lists of Chinese characters representing the underlined words in the two poems. These were translated and written by a Chinese student and are reproduced in Appendix F. The fifth group (C3) received

none of the reading, auditory, or visual stimuli just described.

Three basic response materials were prepared. Type one were archetypal and neutral words. All were selected from the Thorndike-Lorge (1944) list of words and equated for frequency of use. Decisions on archetypal content were made by two informed judges.

Type two were archetypal and neutral pictures. Archetypal pictures were taken from diverse sources dealing with Jungian literature; neutral pictures were of common objects. Again decisions were made by two informed judges.

Type three were the archetypal symbols from Type two alone (Type two without the neutral materials). These three types of response materials were used in the five tests of the hypotheses.

Procedure

Stimulation

Subjects from E1, E2, C1, and C2 were run individually. Each was told that he or she was going to listen to some stories and then will be given tests afterwards. The experimenter was interested in seeing how well these stories would arouse their creative imagination. The subjects then listened to the two excerpts on a cassette tape-recorder, while following them, on a printed copy of the stories. They were also offered an illustration of each excerpt to look at when they wished while listening and following the written text.

Both experimental (E1 & E2) and the first of the control groups (C1) were given the map of 42 archaic symbols after listening to each excerpt. They were asked to "pick out from it the ones that

best illustrate some underlined words in the story sheets and draw them back in their appropriate numbered spaces provided in a column on the right of each sheet." The illustrations for each excerpt were left out during selection of the symbols and removed prior to a new excerpt or the tests. The second of the control groups (C2) was presented with two different lists of Chinese characters. These were substitutions for the archaic symbols. Thus they were represented as translations of the underlined words in the poem stimulus excerpts. The subjects from C2 were asked to "pick out from the lists the character that they thought best corresponded to each underlined word on the story sheets and write back the letter for each character that they chose in their appropriate numbered spaces in the column on the right of each sheet." The two poems differed in length, as said, and the shorter excerpt was followed with a list of only 9 Chinese characters and the longer with a list of 15 (See Appendix F). The listening-reading-watching procedure was thought to expose the subjects of E1, E2, C1, and C2 with the themes in the texts and the working of the symbols and the Chinese character was to involve them deeply in the contents of the texts. The symbols were used with the subjects in the two experimental groups, were designed, in addition, to immerse these subjects with the archetypal origins of the myth words. The different control groups were devised to account for the effect of the symbols on archetypal suggestion. The first control group (C1) directed its subjects toward the intrinsic meanings of the neutral words while the second (C2) offered them Chinese characters and a more concrete type of physical properties.

After initiation into the myths, the subjects in E1, E2, E3, and E4 were administered five successive tasks assigned in a counterbalanced order between the 14 subjects in each group and repeated similarly with all groups. Counterbalancing was employed to control for the active effects from test to test.

A fifth group, C3- was a safeguard for some unsuspected effects not related to the stimulus conditions. All groups were given identical test materials. These were the following.

Tests

The Tachistoscope Test. The subjects were presented with 10 words - 5 archetypal and 5 neutral (Type 1 materials) - successively in a random order on a Ralph Gerbrand two-channel tachistoscope, starting at .001 seconds of exposure time and increasing in even steps of .001 seconds until recognition occurred.

The words were equated as to size, length, and frequency of occurrence in the language. The five archetypal words were: earth, castle, queen, heaven, spirit; and the five neutral words were: month, table, dress, recent, profit (See Appendix G).

The instructions were:

> "I am now going to show you a series of words on this apparatus. Everytime I expose a word, please report everything you see or thought you saw."

The Detection Test. The subjects were presented with a 4 x 4 table of 16 pictures with 8 archetypal and 8 neutral pictures (Type 2 materials) drawn in random order. The archetypal pictures were those of: lotus, rock, butterfly, clock, candle, star, bread, and

hand and the neutral pictures were: pipe, T.V., chair, comb, book, telephone, soap, and umbrella (See Appendix G).

The instructions were:

> "I am going to show you a set of pictures then I will ask you to write down all the items you remember from this set. While remembering the items, please work as quickly as possible."

The subjects were given 5 seconds to look at the pictures and 30 seconds to write down the items they remembered.

The Sorting Test. The subjects were presented with a shuffled pile of 12, 3 x 5 cards of archetypal images (Type 3 materials) representing three archetypes: "self," "spirit," and "mother." The pictures symbolizing the "self" archetype were: ring, apple, rose, and spider; and those symbolizing the "spirit" and the "mother" were: sun, tower, bull, and yang; and moon, church, cow, and yin, respectively (See Appendix G).

The instructions were:

> "Would you please sort these pictures out into three piles of four pictures each that you think belong together."

After the subjects had finished with the sorting, the pictures in each pile were marked down on a sheet of paper.

The Drawing-Completion Test. Three 3 x 5 cards of archetypal images (Type 3 materials) were presented in a counterbalanced order to the 14 subjects in each group. They were outline drawings of an egg, cup, rod, and square (See Appendix G).

The instructions were:

> "Here is a picture. Would you please draw this picture back on this card and add to it in any way you like."

The response drawings were then marked with the initials of the forms completed - E, C, R, or 5 - on the left upper corner of each card.

The Drawing Association Test. Four 3 x 5 cards of archetypal images (Type 3 materials) were presented in a counterbalanced order to the 14 subjects in each group. They were picture drawings of an eye, bird, tree, and lion (See Appendix G).

The instructions were:

> "Here is a picture of a(n) _____. Would you please draw another picture that means the same thing and title it (after it is drawn). Now would you please draw a picture that means the opposite."

The response drawings were then marked with the name of the stimulus picture on the upper left corner and with the quality of the drawing as -5- or -0- on the lower right corner.

After all tests were over, the subjects were asked to explain what had suggested their sortings on the sorting test and their drawings on the drawing test. The rationales were written down on the response sheets.

RESULTS

Analyses depended upon the experimental procedure of the test and thus indirectly also upon the response materials. In the first two tests, the detection test and the tachistoscope test, data in the five experimental methods (E1, E2, C1, C2, & C3) were distributed among subjects between the two archetypal vs. neutral tests. An analyses of variance split-plot design was then performed to test for interactions between the methods and the choice of tests.

The mean number of exposures used, in the tachistoscope test, by a subject in identifying all the words were summed over all 14 subjects in each group (sums are presented in Table 2). The analysis of variance compared these sums between the methods and the tests and revealed no significant differences. The recognition of either archetypal or neutral response words was not affected by the method treatments and was equivalent over the five methods (See Appendix H).

In the detection test, analysis used means instead of sums because of missing data in one of the groups (means are presented in Table 1). No significant interactions were found here between either of the five methods and the number of archetypal vs. neutral response items remembered on the test. A significant main effect, however, was found for the neutral response materials over the five methods (See Appendix H).

With the other three tests, the results were analyzed empirically

Table 1

Mean Numbers of Response Items Remembered in the Detection Test

Methods	Response Items	
	Archetypal	Neutral
E1	2.14	3.28
E2	2.71	3.57
C1	2.23	2.92
C2	2.57	3.21
C3	2.42	3.50

Table 2

Sums of Mean Numbers of Exposures in the Tachistoscope Test

Methods	Response Words	
	Archetypal	Neutral
E1	20.00	20.60
E2	25.20	23.80
C1	21.20	21.60
C2	27.80	13.40
C3	21.20	23.40

E1 = David of Sassoon

E2 = Pecos Bill

C1 = Ogden Nash poems - with symbols

C2 = Ogden Nash poems - with Chinese characters

C3 = No reading material

by the writer on a concrete to abstract symbolic continuum. The concept span was defined separately for each test based on Jung's statement: "...the imagination liberates itself from the concretism of the object and attempts to sketch the invisible...."[17] It postulated that the more involved the subjects are in the archetype the more they will shift from concrete identification of the object towards its archetypal (symbolic) image. It was then expected from the hypothesis, since the two experimental groups (E1 & E2) were immersed in the same archetypes, that their responses would be similar as compared to the three control groups (C1, C2, & C3).

Differences between the three control groups are anticipated. Although differences in responses are expected, the experiment is exploratory as regards what those differences might be and highly specific hypotheses were not made.

The general expectation was confirmed with all three tests. Experimental groups reacted similarly as expected, showing greater abstraction and symbolism. The three control groups showed increasing concreteness in imagery and thought from C1 to C2 and C3. C1 commonly responded with a learned symbolic meaning, less spontaneous and original than the experimental groups but nonetheless concrete and more significant than the other C2 and C3 groups.

In the sorting test, for each of the subjects' groupings, the data were scored with respect to the number of archetypes occurring with a frequency greater than one. Therefore the score for each subject could be a minimum of two and a maximum of four. Subjects who

sorted two archetypes were classified separately. The subjects' groupings were thus classified in 2 x 0, 3 x 0, 4 x 0, or 2 x 2 correct groupings (the frequencies of these groupings are presented in Table 3). The subjects' verbalizations for their groupings were categorized into five conceptual levels according to Rappoport's definitions (1968) of the concept spans in standard sorting tests (See Appendix I).

The frequency of the correct groupings of images was then analyzed, separately for each archetype at each degree of correct grouping, with reference to the conceptual levels of the verbalizations for these groupings.

In the 2 x 0 groupings, apple and rose were sorted together most frequently by all groups, over all archetypal groupings. But within the groupings, C2 and C3 had the highest frequency of this sorting (7, 8) between the groups. The verbalizations for this grouping revealed conceptualization addressing itself to common, concrete "organic" attributes of the two objects. This then bears on the highest frequency of the apple-rose grouping by C2 and C3.

The next most frequently sorted pair (17) was apple-spider by E1 and E2 (4-6). Ordinarily a rationale for this pairing was lacking, suggesting unconscious motivation for the sorting. The other pair, ring-rose, was sorted by C1 four times, being the highest frequency of all three sortings in this group and the next highest between groups (15). The pairing was explained as being a symbolism for love and marriage.

Since these sortings are the most frequent within the groups

Table 3

Frequencies of 2 x 0 Correct Groupings of Archetypal Images in the Sorting Test

Archetypapal Images		Methods E1	E2	C1	C2	C3
SELF	apple-rose	5	3	3	7	8
	apple-ring	1	1	-	2	-
	apple-spider	4	6	3	1	3
	rose-ring	3	3	4	2	3
	rose-spider	1	2	1	3	-
	ring-spider	2	1	2	3	5
SPIRIT	sun-yang	-	1	-	1	-
	sun-bull	-	-	2	1	-
	sun-tower	2	1	-	1	1
	yang-bull	2	1	-	1	1
	yang-tower	1	3	3	1	2
	bull-tower	3	-	-	1	2
MOTHER	moon-yin	1	3	2	1	-
	moon-cow	-	-	-	-	1
	moon-church	-	2	-	-	1
	yin-cow	1	2	3	1	2
	yin-church	1	1	-	4	1
	cow-church	3	-	-	2	-

Frequencies of 3 x 0 Correct Groupings of Archetypal Images in the Sorting Test

SELF	apple-rose-ring	-	2	2	1	1
	apple-rose-spider	1	-	-	-	-
	ring-rose-spider	-	-	-	1	-
SPIRIT	sun-bull-tower	1	-	1	1	-
MOTHER	moon-yin-church	1	-	-	-	-
	moon-cow-church	-	-	1	-	-

Table 3 (continued):

Frequencies of 2 x 2 Correct Groupings of Archetypal Images in the Sorting Test

Archetypal Images		Methods E1	E2	C1	C2	C3
SPIRIT/MOTHER	sun-yang/yin-church	-	-	1	-	-
	sun-yang/moon-yin	3	4	2	4	5
	sun-bull/cow-moon	-	1	2	-	3
	bull-yang/cow-church	-	1	-	-	-
	bull-yang/yin-cow	-	2	1	1	-
	tower-sun/yin-moon	-	-	-	1	-
	tower-bull/cow-church	-	-	1	-	-
	tower-sun/moon-church	-	1	2	-	-
	tower-yang/yin-church	2	-	2	1	1
	tower-yang/yin-moon	1	-	1	-	-
SELF/MOTHER	apple-rose/cow-church	1	-	-	-	-
	rose-ring/cow-church	1	-	-	-	-
SPIRIT/SELF	tower-bull/ring-rose	1	-	-	-	-
	sun-bull/spider-rose	-	-	-	-	1

Frequencies of 4 x 0 Correct Groupings of Archetypal Images in the Sorting Test

SELF	apple-spider-rose-ring	-	1	3	-	1
SPIRIT	tower-sun-bull-yang	-	-	-	-	1
MOTHER	yin-cow-moon-church	-	-	-	-	1

and between, they can be taken as indicating the mode of thought governing sorting in each group. It appears C2 and C3 acted at the very concrete level of thinking, the E1 and E2 at the abstract, unconscious level and C1 at the middle of the continuum. In the last case the rationale for the sorting was symbolized but was conscious and on a functional "sign" level rather than on an abstract "symbolic" level.

The "spirit" archetype had the highest frequency of pairs between all groups. We find yang-tower (10) sorted equally by E2 and C1 (3), but on different terms. C1 decided by the more concrete traits such as "design," "have holes," "man-made objects," and E2 explained with abstract "inanimate" titles. An equal frequency of sorting (3) was done by E1 but for the pair bull-tower and was similarly rationalized with abstract terms such as "history and/or tradition."

With the 3 x 0 groupings, the highest frequency in the "self" was apple-rose-ring (6) well-distributed between groups except for E1 which sorted apple-rose-spider instead. On the one hand, E2 and C1 sorted equally (2) as opposed to C2 and C3 (1) but on the other, the quality of the sortings differed between E2 and C1, C2, and C3. Group E2 could not give a conscious explanation for their sortings. For C2 and C3, they represented "left overs" or "miscellaneous" piles. Group C1 either gave a syncretistic "things of beauty" or a "left over" definition. Here again, we recognize an unconscious symbolic sorting of the items by E2, and a generalized, imposed meaning by C1. Subjects in E1 abstracted their sorting as "natural objects" which seemed to suggest the effect of the mood - joy and peace - in the first excerpt of the myth.

The "mother" archetype was only represented by E1 in the moon-yin-church grouping as "mystical objects" and C1 with the moon-cow-church combination of "farm objects" (the church was sometimes seen as a barn). This showed the concretization of objects and themes by the C group and the mystification of those same objects, by the E groups, with the exposition to the mythical material (slightly more effective in E1 than E2 because of the additional foreign character of the Armenian myth).

For the "spirit" archetype the only grouping was sun-bull-tower by E1, C1, and C2. The sortings by C1 and C2 suggested the effect of the Ogden Nash poems about the "happy husband," for in C1 a female subject rationalized for her sorting as "romance" and in C2 a male subject described it as "male symbols." E1 explained the sorting as "constellation." The Ogden Nash poems may have answered to current concerns of the college students about male and female differences, for this was also apparent in the much greater number of 2 x 2 "spirit/mother" sortings than either "self/mother" or "self/spirit" (43-2-2). This is even more manifest when we consider the highest (18) and equally distributed frequency of the sun-yang/moon-yin combination. Previous findings (Aigrisse, 1963; Craddick, Thumin & Barclay, 1971) indicate that the yin-yang symbol has a strong archetypal significance of opposites in the human conscious.

Moreover, the "self/mother" archetype was only expressed by E1 which suggested that the combined self-mother archetype was being aroused by the elaborate description in the Armenian myth of the virgin mother Dzovinar and her miraculous conception of the child

hero. Furthermore, in the "self-spirit" archetype, E1 sorted tower-bull/ring-rose because they "looked rich and neat," still pointing to the effect of the divine conception of the child hero as self-spirit. The only other self-spirit sorting was done by C3 with sun-bull/spider-rose but was given an irrelevant title: "horoscope."

The 4 x 0 sortings were a miscellany of items given very syncretistic titles.

The results from this test then partially confirm the hypothesis of increasing abstraction in imagery and thought with deeper archetypal suggestion. Also, it may imply a universality of the hero archetype and, more specifically, of the yin-yang symbol of opposites.

In the two drawing tests, the response cards, by subjects in the five groups, to each stimulus picture were numbered 1 to 70, successively. They were then sorted out into piles of pictures that appeared to belong together. The number of piles was arranged so as to be kept constant for all 4 stimuli in each test. The piles were then titled on their common content and ordered from concrete to abstract categories according to a Jungian definition of archetypal imagination. The conceptual judgment for the order of the categories was made, depending on how much removed the response drawing theme or title were from the original drawing and how much they approached an archetypal expression of the stimulus-object.

In the drawing-completion test, the 70 drawings in each group were categorized into three increasing levels of symbolism (See Appendix I), according to both theme and title.

Cup: Responses to the cup as glass or drink were classified as concrete and all other responses as abstract. This latter category included pictures of the cup as goblet, trophy, chalice or as just any form; and those indicating certain symbolic connotations of the cup or drink, for example, pictures, such as: a cup titled "Cup of love" or "Life;" a cup with a ghost in it titled "Spirits;" a cup of fruit titled "Plentiful;" a "stanley cup" and also the 2 drawings of a cup as the hips and legs of a female titled "Miss Hips" and inverted as a hat on a young man's head, carrying a tennis ball on its base, titled "Tennis Ball." These were all classified as abstract for E1.

In E2 the abstract drawings were: a chalice titled "Light" and another one, with spikes in its opening, titled "Fire and Wine;" two glasses drawn base to base titled "Unity;" a glass and a jug titled "Hamlet's Doom;" a glass titled "Glamor has Past," and a "goblet."

Group C1 drew: four chalices, two of them titled as such, the others as "Giver of Life" and "Christ's Blood" and a flower in a vase titled "Alone." In contrast, C2 drew only one chalice titled "Holy Grail," a "trophy" and two "glasses:" one titled "Empty" and the other, with a flower in it, titled "A Flower in a Vase." Group C3 produced one chalice with spikes but just titled it "Chalice" and a glass with bread titled "Last Supper;" a bottle pouring into a glass titled "Abundance" and a fish in a cup titled "Fish Bowl."

All drawings of glasses titled "Celebration," "Party," "Supper" or "Relax" were put in the concrete category.

A close look at these drawings and the titles given to them by

the different groups shows an increasing creativity with the experimental groups. Both drawings and titles were original and represented abstractions of either the form or meaning of the cup, e.g., "Miss Hips," "Cup of Love" (E1); "Hamlet's Doom," and "Unity" (E2). Even similar drawings between the different groups were titled more symbolically in the experimental groups. Chalices were titled "Life" or "Light" in the experimental groups but just "Chalice" or "Giver of Life" in the control groups. An empty glass was titled "Glamor has past" by E2 and just "Empty" by C2. The same drawing of chalice with spikes was titled "Fire and Wine" by E2, was named just "Chalice" by C3.

The outcome suggests that the E groups responded to the cup as a "symbol" and the C groups as "sign." The chalice evoked a deeper meaning to the E groups, a more symbolic understanding of the intrinsic character of the object than just a cliché or "common knowledge" association. The fact that C1 drew a greater number of chalices than the other C groups indicates that the use of archaic symbols in this group must have forced subjects to think more abstractly, but without providing them with a sufficient involvement in the archetypal experience thus leading them to borrow from "learned" meanings of symbols or "signs."

The titles also were more sophisticated in C1 than in the other C groups. For example, the same drawing of a flower in a vase was titled "Alone" by C1 and simply "Flower in a Vase" by C3. Nonetheless, they were stereotyped in comparison to the E groups, with references to "Giver of Life" and "Christ's Blood."

Interesting observations of mood differences between the two E groups were also apparent in some drawing completions in this test (See Appendix J). The E1 showed more humoristic and comical abstract drawings while graver and more serious drawings were frequent for E2. However, the concrete drawings from E2, C1, and C2 had happy themes: "Celebration," "Party," etc. which are generally in opposition to the themes of concrete drawings from E1 and C3. From this it can be concluded that the humor in the Pecos Bill tale and the Ogden Nash poems also had an influence at the concrete level as well as eliciting reaction on a more abstract level. Symbolic reaction to the opposite of the apparent mood in the myths happened only in the two E groups and suggests the complementary effect of the archetype. Possibly the experience of the Hero archetype at the unconscious level aroused in the subjects an awareness of opposites which became manifested in the reactions to the differing moods in the two myths.

Egg: The drawings were classified into categories of completion of the egg shape as an egg, the form of a face or other object or animal, and life and birth. "Birth" drawings were more frequent in the E1 (4) and C2 (3) as opposed to E2 (2), C1 (1), and C3 (2). Since the common variable between the first two is the foreign element (E1 involving the occurrence of foreign names in the myth and the C2 the use of Chinese characters) the emphasis on the "birth" response of the egg can be explained to be caused by a realization of these national differences.

The drawing completion by the E groups of the egg as the shape of a human face or an object were more symbolic than the C groups.

In E1, a subject drew a decorated egg, put a circle around the middle of it and called it "Lone Ranger." In E2, a subject drew black trees with the egg outlined on it and named it "Modern Sun behind a burned out forest," which suggests the influence of the Hero archetype (See Appendix J). The egg was also drawn as "Lady Bug" by an E1 and as "Comet" by an E2 also expressing symbolic imagery of the self. It was illustrated as "Turtle" and "Yawning" by C1 which was not as symbolic as the E groups but fell somewhere in-between the E and the other C groups.

The C groups presented the egg more often as faces and heads or sometimes as just a modified oval shape ("Peephole in a Fence," "modern pin," and "tree rolling" (C2). Paradoxically persons in E1 made many drawings of faces, like the C groups, but most often titled them with adjectives: "Frosty," "Tough egg," Happy," "Feather-brained" as opposed to the control groups which titled them with names: "Person," "Baby," "Indian," and "Woman," "Kilroy," "Comical Dog," "Sunshine" suggesting the emotional involvement of the E groups with the archetype. Persons from E2 and C1 had very few face drawings, but here again the E2 group had some adjective titles: "Complascent Stupidity" while C1 had non-preferring titles such as "Friends," "Face" (See Appendix J). There was therefore a certain qualitative difference between the two E and C groups with C1 falling in-between: the two E groups reacting more archetypally than the C groups and C1 more symbolically than the two other C groups, probably due to the symbol presentation effect.

Rod: Drawing completions were classified into "branches,"

"spring," or "other." E1, E2, and C1 drew "Spring" more frequently (4-7-4) than C2 and C3 (2-2). This indicated that the presentation of symbols directed the subjects to a greater abstraction; to experience the rod seen as a "sign of spring." Furthermore, the C groups completed the rod at a more concrete-functional level, with most often insects and animals on it, but no one of the E groups ever illustrated such natural scenes.

At an abstract level, C1 still pictured the rod as "Buds of Life" and "Introspection" but the E groups attached deeper meaning to it: E1 saw it as the mace of "David," E2 drew another next to it with a leaf on it and titled it "Twin initiating a difference," both completions suggesting the effect of the hero archetype associating the rod with a power image (See Appendix J). In contast, persons of C3 saw the rod most often as "Log in the mist," "Fence," "Reeds of water." For C2, it was seen as a form of an object: a "Bum's stick," a "Flute," a "Road" (See Appendix J).

The E1 animated the rod using human figures such as "Nag" and "George" (See Appendix J). This is similar to what they did in the egg and cup completions. Since this occurred only with E1 subjects, it suggests that the myth of the hero, because of its formal personification of Good and Evil, had evoked the animation of all objects and shapes. This was not transferred to the E2 subjects because the American myth already revealed conscious animation. Here again, we find archetypal tendencies in the two E groups not found in C groups.

Square: Drawings were classified as responses of "cubes,"

"frames, houses and windows," or "other" abstract notions. Cubes and squares were considered the most concrete responses since they represent only geometric forms. And consistent with expectation, cubes and squares were most frequent for the C groups (4-4-5) and least for the E groups (2-3).

A more abstract consciousness was revealed when the square was completed as "frames." This was more frequent for C2 and C3 (5-5) than for E1, E2, and C1 (2-2-2). With house and window responses, the trends were the same. E1, E2, and C1 (7-6-6) are higher than C2 and C3 (4-4) suggesting that the archaic forms of the symbols presented in E1, E2, and C1 have led the subjects to respond to terms of the outlines of objects, as object "signs." Two similar drawings of squares (See Appendix J) by C1 and C2 were titled "Geometric Introspection" by C2 but more symbolically as "Growth from within" by C1. Arriving to a more abstract level, E groups showed a much greater quality of symbolism than any C groups. In E1, the square was barred, with a little animal in the corner, and titled "Lost in the zoo," another contained a man in it and was titled "Alone" and still another had wings on it and was titled "Even squares get high." In E2, the square had a little circle in the middle and titled "Trapped" or an X cross dividing it into four triangles titled "Equanimity" (See Appendix J). All this highly symbolic imagery indicate the work of an archetype in E1 and E2 in contrast to the C groups.

In the drawing association test, three categories were mainly used for each "similar" or "opposite" association of the stimulus picture (See Appendix I). In a few cases, some categories were

divided into two sub-groups when they formed distinct themes and contained a relatively big number of responses within each theme. All categories were classified on concrete to abstract scales.

Eye (S): The frequency of concrete drawings of the eye and other parts of the face differed greatly between E and C groups, more specifically E1, E2 (2-2), C1, C2 (4-5), and C3 (8). Moreover, the redrawing of the eye occurred only in the C groups. The eye became also concretely associated with "Eye glasses" by the C group but had more meaningful titles such as "Instant sight" (E1) and "My eyes" (E2) by the E groups. Furthermore, puns of the eye as "Eye of a needle" or "Sea" were only used by C2 and C3, as concrete repetitions of the word sound. Functional associations such as the eye as "camera" were equally illustrated across groups. However, abstract associations, as "Light," "Insight," or "Knowing" were less frequent in C2 and C3 (See Appendix J).

Eye (O): The frequency of concrete drawings of parts of the face or body was equally frequent in E1 and E2 (2-2) and C1 and C2 (1-1) but greatly increased in C3. This is likely because of the number of opposite puns to "eye" and "see" in this group. There was little difference between groups for the abstract drawings except pictures of "Ignorance" by persons in both E1 and E2 and "Close-minded" by one C1 and of "No eyes" and "Eyeless" by C1 and C2 and "Indifferent" by C3 (See Appendix J). This showed a difference of conception in the conception in the opposite meaning of eye from "not knowing" by the E groups to "not seeing" by the C groups, and C1 sharing both concept spans.

Tree (S): The tree was redrawn showing an extreme of concreteness most frequently by C3. Further, no physical qualities of the tree were presented in this group and drawings of "life and growth" were least frequent. Life or growth drawings were more frequent in the E groups (4-6), declined in C1 and C2 (3-3). Of these, drawings of "Seed" and "Growth" occurred only in the C groups. Groups C2 and C3 particularly associated the tree with growth of a plant or person; E groups generally related the tree to life itself (See Appendix J). C1 stood between the two extremes by picturing "growth" as a dot that "starts out small" and then spreads.

Tree (O): It is more apparent that the C groups thought of the tree in terms of growth rather than life more than did the E groups. Opposite drawings were also present when persons in the C3 drew a great number of inanimate "rocks." Also, persons from both C1 and C2 drew a straight line and titled it "Stagnation" (C1) and "Desolation" (C2), indicating their association of non-tree as lack of growth. E groups presented a similar theme of non-growth with more abstract titles such as: "Barren land - Death" (E1) and "Earth - no life" (E2), (See Appendix J).

Bird (S): No great differences were found, between the groups, on their association of this picture. All drew images of "peace" and "freedom," which seemed to be due to the fact that "dove" has acquired a widely known meaning of peace and freedom. However, E1, E2, C1, and C2 illustrated love and friendship in contrast to C3 which presented "freedom" as an experience of freedom in natural surroundings (See Appendix J). This might have been the result of the creative

suggestion made to the first four groups.

Bird (O): For the same reasons, there were few differences here between groups. Images were similarly presented in all groups with the exception of the "Rock," drawn by the C groups. "Earthbound" or "Grounded" drawn by the E groups (See Appendix J). A certain nuance in thought could be observed here: a rock just represented an inanimate object, as opposed to the stimulus, picture of the flying bird but the person implies by the immobility, a lack of freedom and a greater abstraction than is present in the C groups. C1 compromised again the two conceptual categories with the drawing of a rock titled "Earthbound."

Lion (S): The drawings indicated increasing concreteness with the C groups. C3 had the highest frequency (5) of animal drawings - cat, dog, lion - C2, the next highest (4), C1, lower (3) and the E groups, the lowest (2). Conversely, symbolic drawings of the lion as "king" decreased from the E groups (E1=E2=6) to the C groups (C1=4, C2=C3=5), but not significantly because of common recognition of the lion as king of the beasts (See Appendix J).

Lion (O): Sorting out drawings into categories was a difficult task. Subjects very often drew pictures of "mouse," "cat," "lamb," "dog," "rabbit," "snake"... but titled it differently or, when asked to explain what had suggested those drawings, gave different rationales. For our purpose then, only drawings, representing another animal or plant and were not descriptive of the opposite qualities of the lion; "meek," "gentle," "timid," "lowly" etc..., were classified as concrete. When so defined, concreteness was found to increase from E1(2)

and E2 (2) to C1 (3) to C2 (6) and C3 (5). Animal drawings in the second category decreased between E1, E2 (6-6) and C1, C2, C3 (2-3-3). Only two drawings of animals were not included in this category; they were drawings of a "chicken" which were used as a word illustrative of cowardiness, and "monkey" implying the more abstract sense of joker. Interesting enough, the opposite association of lion as leader occurred only in E1 where he was made a "joker" and in E2 where he was made a "monkey" (See Appendix J). This test then also partially confirms the hypothesis that symbolism increases with the E groups.

In sum, results point in the direction predicted by Jung's theory. The two myths evoked similar archetypal experience in experimental groups in contrast to control groups. Moreover, the mere fact that C1 worked with the archaic symbols seems to have produced a certain superficial "sign" imagery which was absent in C2 and C3 groups. Archaic symbols proved to be a necessary but not sufficient variable for "symbol" formation. However, only immersion into the collective unconscious, offered in the myths, elicited symbolic imagination. C1 used an acquired set of symbols for association but E groups spontaneously drew upon the symbolic richness of the collective unconscious and created symbolic images from a unitary experience elicited by the archetype. One may also argue that the archetypal similarity of the two myths resulted in the common stimulation of the collective unconscious and is evidence for the universality of the Hero archetype.

DISCUSSION

While this research is oriented toward probing the recesses of the human psyche, the very nature of the concept limits possibilities for experimental research. As Jung says, "The so-called 'forces of the unconscious' are not intellectual concepts that can be arbitrarily manipulated, but dangerous antagonists which can, among other things, work frightful devastations in the economy of the personality."[18] The archetype is spirit and it is too free to be easily captured by consciousness in an operationally defined experimental situation. At best, clinical procedures are used to encourage individual freedom and to elicit spontaneous symbolic imagery.

The attempts at experimental measurement of the archetype by two tests resulted in nonsignificant data. This probably occurred because of intervening familiarity and frequency variables in the selection of archetypal and neutral response materials. For example, in the detection and tachistoscope tests, the choice of neutral objects was very limited and all objects that could have assumed symbolic meaning had to be avoided. The range of these objects narrowed down to very "common" practical items of everyday use, which increased the likelihood of their remembering with all subjects alike. Also, because the Thorndike-Lorge list of words was used to compile a list of equal-frequency words, it became an impossible task to find words that matched in length, size, and frequency of occurrence in the language and which, at the same time, could be said to have been distinctly

classified into archetypal and neutral words. Thus some word pairs, although equated on frequency, came out to be less familiar than others. Earlier studies had already pointed out that, although the list is inefficient, it is the only one available (Erdelyi, 1964). Other than the difficulties with word-frequency, the test suffered from mechanical-accuracy problems in exposure time.

The clinical method of analysis was applied and provided significant results. The conceptual level of the responses in the different groups conformed with the hypothesis and demonstrated a hierarchy of symbolic expression - of symbol, sign, and image. While this symbol-sign distinction created significant differences in some tests (sorting test), it made for serious handicaps in some others such as the drawings of bird and lion. These tests were planned according to preconceived notions of symbolic images, set forth by Jung. In retrospect, however, the research appears to have ignored Jung's warnings and Melhado's remarks (1965) cautioning against a priori designations of symbols and has entered into using images which have "acquired" common symbolic meaning. The result, when associating to these images, is that the symbol becomes confused with the sign and fails to arouse creative associations, but elicits stereotyped responses instead.

The arbitrary use of symbols also limited the extent to which the archetypal images were pressed into consciousness. Directed representations of definite media and instructions (Golomb, 1969), show significant differences from free drawings. The less well controlled the stimulus situation, the closer the individual comes to

the archetypal source and reacts on its primary level. Increased control and the archetypal images get censored through secondary-level reproductions. In the present study, some freedom of expression was allowed, but the degree of primordial imagery was nevertheless limited. Spontaneous drawings and paintings, most favored by Jung, have led to more interesting observations (Kellogg, 1967; 1969).

Variables that have most often been found meaningful in the expression of symbolic imagery are: age (Stennett & Thurlow, 1958), culture (Eng, 1959), and psychic functioning (Goldman, 1960). The primary sources of symbolic representations have been children, primitives, and psychotics. Werner and Jung (1969) explain that the mental development and the psychic development of human beings, from childhood to adulthood, also from primitive to "civilized," proceed from a lower degree of differentiation between subject and object to an increasing level of consciousness of these opposites. Psychosis is considered as a return to lower levels of consciousness. Children, psychotics, and primitives are said to exist in an unconscious world of instincts, in a state of universal complementarity within the self, where archetype and instinct are merged. In this context, the spirit of the archetype becomes naturally revealed in spontaneous drawing. There, at increasing levels of consciousness, the link between archetypes and instincts becomes less definite and gets mediated and controlled by the ego. This can be contrasted to the consciousness of the normal divilized adult, where there is a defensive split between the spirit of the symbol and its imaginal expression. Here a spontaneity is lost which became apparent in

this study, when subjects were asked to draw, but became suspended between the thought of the image to be drawn and the actual drawing. They sometimes apologized: "I'm sorry, this is not going to be an artistic drawing." Defensive mechanisms may have been at work to prevent them from reacting spontaneously to the archetypes evoked by the myths. One result is more "controlled" drawings within the E groups and less significant differences from the other groups.

Older age, western culture, and the relative normalcy contributed to a very highly self-conscious group in the sense that Jung defines consciousness. The ego has become much more aware of differences and is too much removed from the unconscious and is in too great a control over the instincts to permit the individual to be free in his imagination. Children or psychotics may have been better subjects because they would have reacted with great originality of responses. A longitudinal study is needed if we are to fully disclose the universality of archetypes. This was not within the scope of the present study.

The myth excerpts, on the other hand, were short and represented only different parts of the myths, which might have failed to induce sufficient involvement into their collective meaning. The hero is portrayed, by Campbell and others, as the total individual from his birth to initiation to return. The present study seems to reveal that an archetype is a total image and can best be experienced in its complete form. To immerse the person into the depth of the collective unconscious and evoke the archetype of the hero with full spirit, we should best confront the person with an entire myth.

The use of more spontaneous responses, of much younger subjects and of greater, more complete involvement with the archetype hopefully might increase the significance of the results. For example, continual reading of the whole myths to children, at bedtime, over a certain period of time, with subsequent analysis of their dreams, might disclose the unconscious symbolism of the archetype.

The influence of the archetype is so strong that it impels the individual to search for the deeper symbolic meanings of the unconscious. It is the motivating energy and the goal: to strive to understand the teachings of the soul, to grasp the images of the inner man. Jung himself acknowledged the significance of the collective unconscious and realized the aliveness of the archetype. He lived in himself the proof of his own psychology. He was able, through his knowledge and personal insight, to return to the roots of all patterns of thought or behavior and discover the foundation of all human experiences.

With comparative studies of myths, dreams, and psychotic fantasies he arrived at the primordial themes of existence. He suggested that etymological parallels among words correspond to similarities in symbolic content. He tried to integrate his intuitive knowledge of the man in himself and his scientific understanding of the man in everyone and produce a full theory of what he found most basic in human life: the universality of an archetype.

This study was an attempt to extend some of Jung's insights to a broader scientific scope. We assumed that the archetype was to be found living in the myths and in every subject in the experimental

groups, that it would stir the deepest recesses of the collective unconscious and present the individuals with the rich memory of their symbolic heritage.

The experimental evidence of the archetypal suggestion was inferred, as implied by the theory, from the symbolic expressions of the experimental subjects in the different modes of the sorting and drawing tests. Furthermore, regarding the highly emotion-laden character of the archetype, the verbalizations of the subjects for their responses were given special consideration. Prominent theorists have written that "throughout the literature on perceptual learning," they have found, "innumerable studies in which subjects were queried as to what they were aware of during the studies and time and again it has been found that results have varied with verbalized reports of awareness."[19] In the present study, the subjects' rationales proved to vary distinctly between groups, for similar drawings and sortings. A clinical assessment of the responses appeared then to be necessary and called for by the attribute of the theory. This method implied a subjective analysis of the data, which limited the scientific reliability of the study but yet is very telling of the import of the theory. Jung himself has warned against the possible explanation and disposal of the archetypes; "even the best attempts of explanation," he notes, "are only more or less successful translations into another metaphorical language."[20] Perhaps this is no less a shortcoming of the theory but, on the contrary, makes its richness, by drawing on the allegory of life itself: on its mystery, and its elusion.

However, the best we can do to explicate the archetype is to circumscribe it from comparative studies, by symbolic manifestations, and on the basis of human psychological experiences. This study has tried to draw on all this information to disclose the archetype as explicitly as possible, but much is still left unknown of the workings of the archetype. The archetype is the basic essence of the human race and, by its very nature, will continue to fascinate and impel individuals to follow it to the deepest recesses of the collective unconscious and, ultimately, to unravel the mystery of human existence. And as Jung writes: "Anybody who really knows the human psyche will agree with me when I say that it is one of the darkest and most mysterious regions of our experience. There is no end to what can be learned in this field."[21]

FOOTNOTES

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5. Ibid., p. 42.
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20. Jung, op. cit., p. 45.
21. Ibid., p. 9.

APPENDICES

APPENDIX A

The Voyage of the Hero

"Whether the hero be ridiculous or sublime, Greek or barbarian, gentile or Jew," says Campbell, "his journey varies little in essential plan. Popular tales represent the heroic action as physical; the higher religions show the deed to be moral. Nevertheless, there will be found astonishingly little variation in the morphology of the adventure, the character roles involved, the victories gained."[1]

The universal path of the hero from childhood to youth, to return or death underlies transformations which are often celebrated with great pomp and ceremony. The Hero is born through non-natural means either from virgin birth or in unnatural circumstances. He is endowed with supernatural powers from the moment of birth or even of conception. He "is human but raised to the limit of the supernatural - he is 'semi-divine.'"[2] His origin is from a wholly improbable source and so he is threatened at birth by envious collective forces. He spends his youth in exile under the tutorship of animal or human guardians. He grows fast physically and is very strong, but mentally is very naive and uninhibited. This phase could be compared to what Paul Radin called the Trickster cycle in the Winnebago Hero Myths. Later this trickster hero slowly becomes socialized, growing through the infantile and instinctual urges into the Hare cycle, as founder of human culture.

The mature hero then returns from exile "to perform his adult deeds among men."[3] He has now reached the Red Horn cycle in which, with the aid of supernatural powers and tutelary gods, he "vanquishes

evil in the form of dragons, serpents, monsters, demons, and so on, and liberates his people from destruction and death."[4] The Hero as "Warrior" has thus proven himself in battle and has ensured victory. He now, as "Lover," can win the maiden and marry her. She acts as intermediary between the Hero and his father. The Hero must first work in accord with her before it is possible for him to achieve atonement with the father and receive from him the scepter of dominion "as emperor and as tyrant." "When the will of the Hero is atoned with that of the father, the Hero's boon is self-transcendence which delivers him from the snare of egocentricity."[5]

The Hero now realizes that he and the father are one. He slays the father and then himself assumes the crown, he thus becomes, himself, the father and is now ready to return as "world redeemer" to the starting point of his journey "bearing with him the boon of enlightenment and offering to share it with mankind."[6] But if the hero should assume the unmanifest rather than the manifest aspect of the father, he would then become "the world renouncer" - a saint.

The last act in the biography of the hero is that of death or departure. "The hero who in his life represented the dual perspective, after his death, is still a synthesizing image: he is either only sleeping and will arise in the hour of destiny, or he is among us under another form."[7]

This theme of synthesis is repeated in the last cycle of the Winnebago Hero Myths, that of the Twins, in which the Twin Heroes represent the introverted and extraverted polarities of the hero's dual nature, who originally were united together in the mother's

womb, but were pulled apart at birth and have to be reunited. And so does every hero leave the mother's womb at birth, rise up to full consciousness in adulthood and return to the womb-tomb at the end of his life.

Jung compared this route of the hero to the course that the sun follows from sunrise to sunset; ascending from the waters in the East, outlining half a circle in the sky, reaching to the highest top at mid-day and descending to the deep waters of the West. This revolution of the Hero's way is very obvious in the Oedipus myth, the hero myth par excellence, in which Oedipus was destined to leave his mother at dawn and return to her at sunset. Northrop Frye explains that "myth serves on the fundamental element of design offered by nature - the cycle, as we have it daily in the sun and yearly in the seasons - and assimilates it to the human cycle of life, death, and rebirth."[8]

The child symbolizes the preconscious and postconscious essence of man. He evolves from the nondifferentiated unconscious state of the womb towards a differentiated consciousness where he recognizes the "otherness" of the world, and his independence from it, yet finds himself caught between opposites. And so the hero will try, in the afternoon of his life, in the postconscious phase, to link up the past and the present, the unconscious and the conscious and achieve a state of equilibrium, a unity of opposites - The Self. The Child-Hero represents the entelechy of this self which is to be synthesized in later life for rebirth. As Jung says: "In the beginning of life, in early childhood, one sees what an individual really is. Children

who are already introspective at an early age have an intuition about themselves which perhaps never leaves them. They know just what they are. Later on they lose this knowledge. It is partially squeezed out of them, partially they succumb to certain illusions and it is only much later that they discover themselves again."[9]

The Hero is the archetypal forerunner of mankind who does what we would all like to do, he "finds himself." Jung says: "The Hero signifies the potential anticipation of an individuation process which is approaching wholeness."[10] He symbolizes the life urge to the law of maximum self-fulfillment, that "innate 'individuation' necessity, which requires that we become what we are meant to be"[11] to realize the already existent potential for wholeness, the entanglement of an oracle prophesized at birth, the synthesis of the self; to achieve identity that one <u>is</u>, to discover that essence which makes us one with the world and which returns us back to our origin, to the Mother, into the void - the Eternal Tao.

The myth of the Hero is then, as Jung reflects, "the myth of our own suffering unconscious, which has an unquenchable longing for all the deepest sources of our own being; for the body of the mother, and through it for communion with infinite life in the countless forms of existence."[12] But it does not only serve the requirements and obsessions of the individuals, but also those of the nation, race, mankind.... It represents the unconscious processes of whole tribes or races, the dreams of mankind, its wishes and fears. It first establishes a sense of identity for the people and then helps "to allay the primordial anxiety because it addresses itself

specifically to the problem of life and death."[13] It releases the most suppressed fears of people threatened of extinction or domination and expresses its innermost longings for affirmation of aliveness, and assertion of freedom. "It tries to balance out a disequilibrium caused by external environmental forces: man's rationalization for survival."[14]

Footnotes

1. J. Campbell, The Hero with a Thousand Faces (2nd Ed.). New Jersey: Bollingen Found. Inc., 1968, p. 38.
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5. Campbell, p. 32.
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APPENDIX B

Hero Archetype in Two Folk Myths

THE ARMENIAN MYTH

The Armenian popular epic, David of Sassoon (1961), recounts the Hero's path from birth to consciousness to death and rebirth, on the individual, personal level within each of its four cycles and on the deeper national level over four generations.

The Evolution of the Race

The four cycles represent the four different phases of the race's adventure from birth to separation, initiation and return, also overlapping with the four: Trickster, Hare, Red Horn, and Twins cycles in the Winnebago Hero Myths.

Sanassar and Balthasar are the twin founders of the House of Sassoon, who execute the acts of the first cycle and give course to the acts in the following three cycles. They represent together the genesis of a race of Daredevils, the birth of the nation. In their complementarity, they symbolize the self, the center from which all life will spring and to which all life must return. Sanassar's son, Medz Mher, is the culture hero of the second cycle who builds Sassoon up with a cathedral and a Hunting Park and denotes by this the separation of the race from the center into the spiritual and physical opposites. By the third cycle, the race attains full consciousness of those opposites in the figures of the great national hero David (Medz Mher's son) and his most fearsome enemy Misra Melik.

David's son, Pokr Mher, ends in immortality this cycle of generations eternally begetting and begotten, and closes the fourth cycle back to its origin of oneness in the first cycle. With this full evolution of the cycles, the race reattains unity within the Self and fulfills the path, on the individuation of a race, from birth to death unto rebirth.

The Adventures of the Heroes

The heroes go through the same transformations in each cycle as the nation undergoes through its life over the four cycles. The fact that the same pattern of the hero's adventure is repeated in all four cycles reveals the dynamic effect of the archetype. This pattern is similar to the standard universal pattern of all hero myths as discussed by Campbell.

Sanassar and Balthasar are conceived through nonnatural means and generate that supernatural seed to their hero offsprings. The heroes are very strong from birth and "grow by the day what other kids grow by year." They are instinctual and naively commit pranks and mischiefs. They display bravery and prowess without soever being conscious of their power and arouse the jealousy of their opponents. They become threatened from birth of exhibition and death, but are kept protected by a good Mother, until they become conscious of their identity. They then break away from her and set off in search of their father. The fight between the heroes and their childhood opponents or other representatives will grow throughout the heroes' youth until they are able to overcome them in battle. These shadow

figures are always represented by foreign enemies with greedy desires for expansion of their lands to the Armenian territory. The heroes are able to defeat these powerful invaders with the magical boons which were discovered by Sanassar under a Lake and passed through the generations as family lineage, and which are bestowed on each hero for initiation to leadership and manhood as warrior. These are the armors, the mace, bow and arrow; and most significantly the Lightning Sword, the Fiery Horse (who would only choose a worthy master for rider) and the Battle Cross (which will be placed by God's order on the right arm of the worthy hero).

As these monsters of darkness are overpowered, the heroes ascend to an increasing clarity of consciousness which "draws opposites more and more distinctly and irreconcilably apart."[1] And "once the masculine consciousness has attained this height, it comes to face with its feminine counterpart, the Anima."[2] The heroes now look for wifes; most often the maidens are imprisoned by a tyrant or under spell and the heroes have to free them by proving themselves through trials and killing the monster guarding them, before they are able to marry them.

After marrying the positive anima, the heroes are then tempted by the negative anima, who is always a stranger and an enemy. They most often fall by drunkenness into her arms, but they realize this sin in time and return "home" to the father land to fertilize and prosper it and light up the "Torch of Sassoon" with a legitimate successor.

The heroes, once achieving mastery over their Anima, can reach atonement with the father. It is in accord with the Lady's will,

that the heroes are here able to be atoned by the father with the birth of a son - symbol of their rebirth and that of their race and, by it, of the redemption of their people.

THE AMERICAN MYTH

Pecos Bill (1954) is another mythical figure who has distinguished himself with his exploits and adventures among the Texas cowboys. He has no magical powers but his origin is so clothed with mystery, his exploits so numerous and his nature so hardy and brave that he takes on non-natural dimensions. Thus Dorson finds that "both in process of growth and in pattern of story, the American strong hero shares characteristics common to the international type."[3]

The conception and birth of the hero are natural but enveloped with the circumstances of the mythic tradition. The mother is an outstanding figure, who has killed 40 Indian chiefs and gained respect for her bravery and strength. The father is just an ole man, largely unknown.

Pecos Bill is brought up among the coyotes, in their free world of instincts, and is taught wisdom and fight by them. He grows mischievious and strong but is very naive and from childhood arouses the jealousy of the snake and the mountain lion.

The break, through the self, the emergence from the inertia of nature to a spiritual initiation into consciousness, first begins for Pecos Bill with the realization that he is not a coyote but a man. From then on he develops his ego which will subsequently bring him to an awareness of duality between man and animal, culture and

instinct, responsibility, and mischief.

Once he has grown out of the Trickster cycle, he will become the great culture-hero who, with inventions and exploits, will bring transformations in the social and agricultural life of his fellow men and establish himself as their great Hare hero. Later in life, Pecos Bill is challenged by the snake and the mountain lion and is able to subdue them to servility. He also defies Gun Smith and Knives, two cowboy leaders at Hell's Gate Gulch Outfit, and resists their fatal weapons. Thus Pecos Bill asserts himself master of his shadow: he rides the mountain lion, uses the snake as quirt and succeeds as boss at Hell's Gate.

As the Armenian and other national heroes, the Texas hero will now win the boon of manhood - the Great Pacing White Mustang - which marks the peak of his leadership and initiates him for the tasks and functions to follow. Here, too, the hero has become worthy of that "fabulous horse of each vaquero's happy-hunting-ground dreams, of a magnificent steed fit only for the heroes of Valhalla. Mustang stallion of purest silver-white, long barreled, sturdy legged, standing over his manada with the wind whipping his long mane into a banner of freedom."[4]

Once Pecos Bill reaches consciousness, he meets with the Anima figure, Slue Foot Sue, the "true gril of the West." She shares his physical qualities and character, is the same size and as graceful as Bill, and has the same general looks and a voice equal to his.

Pecos Bill finally arrives at the Circle Mountain Ranch where all extreme seasons meet and in which he rediscovers the mountain

his folks climbed on his birthday, where norther followed the sun and he was born at the end of the journey. This sequence represents the genesis of the self in the center of opposites, and its return, after differentiation and consciousness, to its original state of wholeness. In the Armenian myth, this image of wholeness was symbolized by the "Tower," founded by Sanassar and Balthasar at the source of the two river branches and rebuilt by Pokr Mher, again at the meeting of the two rivers, in the close of the race.

Pecos Bill, at this point, retires to Big Cave Country, waiting until he is needed again to return to men. This behavior is similar to Mher's withdrawing to a cave at Raven's Rock "until a grain of wheat is as big as the berry of sweet-briar, and a grain of barley grows to the size of a hazelnut."

The Two National Heroes: Similarities and Differences

We find a similarity between the Armenian and the American heroes in their character, life pattern, and impact. Just as David of Sassoon was the hero, not only of the Sassoonites but of all Armenians, so is Pecos Bill, not only the Texas hero, but the hero of all Americans. Each hero takes on the color and form of his nation and identifies with the immediate needs and problems of his people; Pecos Bill guides his fellow men with the ranching and cow trapping, and David struggles to release his people from domination and slavery. But both of these heroes, as well as the other heroes of the Armenian epic, are very similar in their personality, moral standards, and spiritual achievements.

Both Bill and David are naive and without malice, loyal and

honest, strong, and just. Also, they never kill in anger or for financial gain. Both are guardians of law and order. Men of peace, they strive for the best for their people using only resources and energies of their own. They do not have any expansionist desires but act only to preserve the life and freedom of their people. The adventures of these heroes have basis in actual events in the life and freedom of their respective countries; they reflect either the memories of invaders from other countries or the burdens of a harsh climate in cultivating a new land. "These fantastic elaborations are an expression of the psychological attitudes of men toward real events over which they have no control."[5] For the Armenian hero, it is a cultural struggle between Man and Man but for the American hero, it is a struggle between Man and Nature "which was again severe enough in the New World to obliterate individual differences in the face of a collective danger."[6] Fighting either Misra Melik or the Snake, the main feat of the heroes is to protect themselves and their people from the opposing forces. Whether these be environmental or political: weather, insects, animals or persons, the underlying struggle is one for survival.

In summary, then, it seems that the two myths are comparable in pattern and theme. Both describe the hero's adventures from childhood, fighting for survival through trials and shadow figures unto immortality, even though there are national and individual differences in content, relevant to the time and place of each myth. The main difference is perhaps the nature of the struggle carried by the hero for his own and his people's survival and the type of enemy fought

against. Much can be told about the hero by the type of enemy he has (as is true of all other men). The hero's identity, which he tries to discover and uphold, is best established against the existence of its opposite and best implied by the import of that opposite.

Pecos Bill and other American heroes are conquerors of the land against environmental threat while David and his compatriots react to political invaders. This difference in enemies produces a certain difference between the heroes. Here David appears more revengeful and hostile than Pecos Bill because his opponent is a human, with greedy desires of expansion. This spite makes him almost as malicious as his opponent; this, however, is offset by his spiritual qualities.

Pecos Bill appears to be more naive and cordial than David. He is more often motivated with a logical sense for justice than an underlying stirring emotion for revolt. If we should analyze both heroes into Jungian typology, Pecos Bill would be the "thinking" and David the "feeling" types. Nonetheless, whether of either type, the individuation process remains the same, namely, becoming aware of the "inferior" function. David faces the shrewd, tricky Misra Melik and Pecos Bill the angry, raging snake. As Jung explains it, the hero, when overcoming the shadow, comes to face with his unconscious opposite function. In both we also realize that the opposition between the hero and his shadow also occurs on two different levels of functioning. Pecos Bill fights forces differing in species and form, while David opposes his aggressor only on values and convictions.

The "bête noire" is represented by natural forces in the

American myth and by human opponents in the Armenian myth. Although these two shadows are different in content according to their cultural and geographical positions, the form they assume is equivalent: they denote the dark side of the hero, the "evil" figure who represents his unconscious, instinctual traits but is still a part of his conscious, differentiated personality. This is why the shadow is portrayed in these two and other myths, as a wild, beastly character bestowed with the hero's physical traits. In the Armenian myth the shadow is more often a human being sharing the hero's physical makeup. But in the American myth the shadow is represented by animals or natural forces animated with human qualities to match the hero-counterpart.

And as the archetypal figures and adventures differ in content between the two myths, so does the archetypal theme of survival vary in its dimensions in the two myths. Due to the presence or absence of frontiers, survival did depend on preservation of land and culture in the Armenian myth and on conquest of new land and space in the American myth. Therefore, a greater emphasis was placed on the Hare cycle in the American myth and the Red Horn cycle in the Armenian myth. The functions of the hero as builder and founder are more needed in a new growing country, at the first stage of the colonization of its land, then the services of the warrior who has already established the identity of his civilization and has to fight the enemy for its survival.

The fact that these heroes are differentiated in their geographical and cultural designations should not be ignored, but within themselves they carry a basic essence: the universitality of an archetype.

Footnotes

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4. D. Day, Big Country Texas, New York: Duall, Sloan and Pearces, 1947, p. 86.

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APPENDIX C

Symbolic Analysis of Myth Excerpts

David of Sassoon - "The Birth of the Hero"

This epic starts with the miraculous impregnation of Dzovinar, the virgin daughter of a Christain Armenian king. She is to be wed to the pagan Khalife of Bagdad to secure the establishment of peaceful relations between the two nations. Before the wedding, she is drawn to the mountains and lakes. (Dzovinar means the celestial light of the sea, and is represented in pagan Armenian mythology as the goddess of rain, springs, and lakes.) There is her primordial source of being and will become the archetypal source of energy of all her offsprings of Sassoon. In naked purity, she immerges in the water and swims to the Milk Fountain gushing out from the universal matrix of a big rock. She receives in "cupped" hands, an immortal drink vivifying and purifying by its whiteness and coolness. This is the primordial nourishing source of all supernatural properties, the medium from which will germinate the "seed" of the Sassoonites.

Here we find "the world generating spirit of the father passing into the manifold of earthly experience through a transforming medium - the mother of the world."[1] This synthesis of divine unconscious and human consciousness generates the genesis of a Self of unknown origin, breaking through opposites unto conscious existence. The miraculous impregnation of Dzovinar by "God's spirit of Light" produces the twin heroes, Sanassar and Balthasar.

David of Sassoon - "The Conquering Hero"

David and Misra Melik represent the "light" and "dark" heroes who are split by birth from a common father Medz Mher, and two women symbolizing his two opposing anima figures: David born from the positive anima, the affectionate and loving wife Armaghan, and Misra Melik, from the negative anima, the enemy temptress Ismil Khatoon (Queen of Egypt). These two half-brothers denote the perfect split through the self. They will jointly inherit the father's physical, superhuman powers but not the spiritual, moral traits. They will typify the equal forces of good and evil constantly fighting; the one for domination and the other for freedom from it until finally they meet in single combat to determine the winner.

In this symbolic combat each takes turns, each strikes "three times" at the other. The number three is not an accident but a magic number. Three is a complete number, it represents a total elaboration of an event into three different forms centering and recycling back to the same event, thus emphasizing, by multiplication, the importance of the event in the story, while keeping it in focus.

In this combat, David gives Misra Melik the chance for the first three strikes. In this way he assures himself a greater victory, because of the failure of the monster to overcome him first, and gains moral grandeur for his "esprit chevaleresque." Similarly, the youthful David wins finally over the "older" Misra Melik with one strike to his brother's three. Here, as in most myths and fairy tales, the younger brother is made to succeed over the older brother, is left with the last chance and is the only one to succeed. This

makes a better hero of him as he, on the one hand, is able to achieve what others have failed and, on the other hand, is able to triumph in spite of all the disadventages working against his success. He overcomes a younger age, and the disadvantage of being the last brother to attempt a feat at which his elders have failed.

No matter what a great start Misra Melik takes, or how hard he throws his mace, David stands unharmed. At every strike David disappears in the dust storm Melik stirs with his mace but reappears again, alive. Evenytime, Melik cries out "David is dead," and leaves us in great apprehension of the hero's vulnerability and dread of his death; but each time, David springs up again. He cries joyously, "I'm still alive," and in so doing releases us from our deepest fears and reinstalls our faith in his and our own infallibility. This replay, as in a-peek-a-boo game, of "now-I'm-gone-now-I'm here" seems an enactment of the problem of survival for the individual hero and his race, and the establishment of confidence and identity in victory, a theme inherent in the whole myth.

When he takes his turn, David asks: "Is the world governed by rule or by force?" The answer is obvious that it must be governed by rule since David's sword eventually prevails over Misra Melik's mace. Justice and honor are on his side and then his sword will give him the power and purity to conquer the Evil in utmost certainty.

In contrast, Melik hides himself underground, this is his world, this is where he is most safe from David's upper world. This well-split separation of the two worlds and the distinction "from the underground of the lightning valor" has a purifying symbolism. It

emphasizes the spirituality of the combat and thus assures David's victory by his Lightning Sword. We find that David cuts through the "black waters" of the pit and splits "the monster in two" and achieves an ultimate catharsis: the annihilation of the evil and purification by the good.

Pecos Bill - "The Birth of the Hero"

The hero Bill is endowed with supernatural strength and given an exceptional genesis. His origin is associated with water; he is born on the day his folks "crossed the Sabine River and it was raining hard." His birth symbolizes an entelechy of the self from the unconscious levels, and a synthesis of opposites: light and dark, sunshine and cold. On his birthday, his folks climbed a mountain where summer and winter overlap, where norther follows sun, where their two oxen, dying in opposite weathers, seem to have synthesized in the birth of the hero and reincarnated in Pecos Bill the archetype of the Child Hero.

Pecos Bill - "The Conquering Hero"

Like Misra Melik, the snake is threatened by the growing consciousness of the hero, "as he sees him excel in every way." When the chance comes, he challenges Pecos Bill to a fight. And, like the David-Misra Melik combat, Pecos Bill gives him the first "three" bites. But on the third bite, he flexes the muscles in his arm and cracks the fangs of the snake; the snake wriggles with pain. Pecos Bill then spits in the snake's face and burns it with an intense fire, which he has swallowed when he was a kid. Both sword and fire have

the same purifying symbolism as in mythology. Both project the struggle of the Good against the Evil, as they "cut through" the unconscious depths of the monster, in the purifying impulse of the hero's consciousness, where Good predominates. Therefore, like David and Misra Melik, Pecos Bill and the snake represent the coexistence from childhood of the hero and the shadow; the shadow continually struggling to usurp the hero's leadership until the hero reaches consciousness and is able to overcome the evil forces of the shadow.

Footnote:

1. J. Campbell, The Hero with a Thousand Faces (2nd Ed.). New Jersey: Bollingen Found. Inc., 1968, p. 239.

APPENDIX D

STORY SHEETS

Exp. Group 1 - David of Sassoon*

(E1) - "The Birth of the Hero"

The wedding of the lady Dzovinar[1] to the Caliph of Bagdad was celebrated in Blue Castle for seven days and nights. On Ascension Day,[2] during the wedding festivities, the King let his daughter go to the monastery of Hili with her bridesmaids and an elderly woman who acted as governess. The monastery was crowded with pilgrims, and there was much singing and dancing, drumming and piping. The spring[3] air was filled with the odour of wild flowers. The lady Dzovinar and her friends hiked in the hills and strolled on the seaside, wearing chaplets of wild flowers. They prayed in the monastery and went down to the Milk-Fountain[4] with baskets of food, where they ate on the grass. It was a fountain of immortality, revered by all pilgrims. She became thirsty and drank from it, filling her silver cup;[5] then she drank half a cup more, and before going home knelt before a cross stone and prayed with tears in her eyes.

She conceived[6] that day by God's order,[7] and when they put her on a horse and sent her to Bagdad with her husband, who some said was ninety years old, she was already pregnant, though she was only ten or eleven and had not reached yet the age of puberty.

Nine months, nine days, nine hours, nine minutes after she drank from the Milk-Fountain the lady Dzovinar gave birth to twins, one bigger than the other. They were secretely baptized by Father Melchizedek. The bigger boy was named Sanassar,[8] and the small one Balthasar.[9]

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*The two excerpts are drawn from a prose version of the Armenian epic by Surmelian (1964).

Exp. Group 1 - David of Sassoon

(E1) - "The Conquering Hero"

David[1] and Misra Melik[2] rode around the arena, warming up their horses. Melik said: "David, shall we fight in free style, or by turn?" 1

"As you like," said David.

"By turn then, said Melik. Each man is allowed three strikes.[3] Who shall strike first?"

"You are the challenger,[4] said David, but you strike first. You are older and if you kill me Melik, I have no mother or wife or sister to weep over me and to bury me." 2

Misra Melik then played with his mace,[5] weighing three hundred and sixty liters. He swung it to the left, to the right, and twelve liters of fiery sparks poured out of it. David shouted: "Melik, strike! I will wait for your first strike here." 3

Melik rode all the way to Diyarbekir and came back thundering across the plain while David waited on his horse, covering himself with his shield, one hand on Marouta's holy emblem, and murmuring a prayer. Melik yelled in a fierce voice, "Dust you are, and to dust you return," and struck with savage fury. His mace cracked the earth wide open and sounded like forty pairs of buffaloes dragging the plow. David disappeared in storm clouds of dust and the King sighed in a mock voice; "Alas, a thousand times alas, our splendid David was dust and I turned him to dust." He waited until the dust-storm settled, and heard David shout back: 4

"Don't worry Melik, I haven't turned to dust yet." His fiery horse[6] flew up and Melik missed him. 5

Melik said: "Homewrecker, I did not go far enough. I will strike again."

He turned his horse around and rode to Aleppo. He came like a flash and let David have it. The earth groaned. Melik drove his mace forty cubits into the ground, but missed David, 6

whose horse sprang up again, and David disappeared in the dust-storm Melik stirred up over the world. The King lamented: "Alas, a thousand times alas, we reared splendid David in our home,[7] we took care of him as our very own, and now we lost him. The poor darling turned to dust." 7

David said, as the air cleared: "Melik, be sure you don't miss the third time. It is your last strike." 8

"Hey! You still alive? said Melik. The world whirled darkly around him."

"David, this is enough for today, he said. We can continue tomorrow."

"No, strike now," David said.

"You stand here, then, and don't move," Melik said. He made him change his position. He thought he had to go even farther to strike harder. He blamed it all on his horse. He rode to Bagdad and came back at unimaginable speed to send David to the bottomless pit. He struck, and the whole world shook as in an earthquake. He tore they sky apart, as when stormclouds in the spring flare up on mountain-tops during a crackling roll of thunder. The sun was blotted out. Nothing could be seen for a day and night, and Melik lamented: "Alas, a thousand times alas, our splendid David was dust, and I turned him to dust." When the duststorm settled and the sun came out[8] David slapped his head a few times to straighten up his neck, which was bent to one side.

"Don't worry, Melik. I am still here," he said.

"Hey, homewrecker, let me try once more," Melik said.

"No, you had three chances, David said, Now it is my turn. Which do you prefer? My sword or my mace?"

Melik said in his mind: "Who can stand a blow by his mace?" He called out: "David, strike with your sword. But give me seven hours to prepare for it."

"You can have forty hours if you like, said David. Go dig up your grave and have your tombstone carved."

"I fear that look in your eyes, David. Will you let me wait

for your first strike in my tent? I will go lie down in my tent."

"Go lie down whereever you like, said David, and if you are so scared[9] go down to the bottom of the well and close its mouth with forty millstones and forty buffalo-hides. I have three strikes." 9

"Your fiery horse leaped high into the clouds when I struck and that's why I missed, said Melik. To make this a fair contest[10] I will go stay in the well." 10

They lowered Misra Melik into the well,[11] forty cubits deep, and closed its mouth with forty millstones and forty buffalo-hides, and then spread carpets and his quilt over it. Melik felt safe in the well. David mounted his horse and raced back to Dzovasar. He 11
came flying with the Lightning-Sword[12] blazing in his hand. "One God, one David, one strike." He said his profession of faith, "I believe..." and struck the green tent like a thunderbolt shot out of Mount Ararat. He cut through forty millstones, he cut through forty buffalo-hides, he split Melik's skull[13] in two and his sword 12
came out between the legs of the monster and plunged forty cubits into the very bowels of the earth where the black waters flow. If an angel had not held his arm David would have flooded the whole earth with the black waters of the bottomless pit.

Misra Melik called from the depths of the well: "David, 13
that was just a flea bite. Strike again. And hurry. It's cold down here."

David said: "Melik, shake yourself, move around a bit. A brave man[14] strikes only once."

Melik shook himself. One half of him fell to one side of 14
the well, the other half fell to the other side, and that was the end[15] of the King of Egypt.

15

Exp. Group 2 - Pecos Bill

(E2) - "The Conquering Hero"

They were scarcely more than started when, without warning, a rattlesnake[1] twenty-nine feet long struck at Bill[2] and sank his poisonous fangs into his leg. Bill brushed his leg absently, saying: "Musketeers is bad around here, Curly. Git away you!" He rubbed the place where the snake had bit him. 1

The snake, who had a reputation as a killer[3] was enraged. He shook his rattles violently. Bill turned his head curiously. He was well acquainted with the sound of a rattlesnake, but his snake was bigger than an ordinary rattler. Naturally he didn't sound like one. 2

"There must be a bunch a 'Spanish dancers' round here somewheres," Bill said half to himself. 3

He had made a very natural mistake. The snake was so big[4] that the sound of his rattles was like the castanets of a large group of Spanish dancers.

Now the snake was fit to be tied. "Them ain't no Spanish dancers!" he screamed. "Its's me!" 4

At this, Bill looked down and saw the snake. He recognized him at once. It was the same snake[5] who had been so uncooperative years before when he was a coyote pup. From that time on Bill had let the snake alone. But he had watched Bill grow up. As he saw the boy excel in every way, the snake had become jealous[6] he had refused to accept the lad's leadership. He brooded over the fact that Bill was such a superior individual.[7] When his chance came, he struck without warning. 5

The rattler's treachery disturbed Bill. He did not have that nature himself and could not understand it in others, then too, there is a code among rattlers and the code had been outrageously violated by the reptile. Not knowing this particular snake, Bill had no reason either to like or dislike him. But Bill certainly did not like his manners, and said so contemptuously. 6

"That kind a stuff is jest a breedin' a scab on yur nose, stranger." 7

"There you go," said the snake, "interfering in my business. I told you years ago to tend to your business and I'd tend t'mine."

Bill looked at him coolly. "That's jest what I done," he drawled.

"That's a lie!" hissed the snake who was spoiling[8] for a fight.

"O.K., partner," said Bill. "You asked fer it. An' I'l tell yuh what I'm a goin' to' do. Jest t'make it a fair fight,[9] I'm a goin' t' give yuh the first three bites!"[10]

"Get outer th' way Bill!" yelled Curly who was fingering his club. "I'll finish th' critter off"!

"No," said Bill calmly. "I'll take care a' this alone."

Bill turned to the snake. "Wal." he said, "Yuh got two more bites a comin.' Yuh better make 'em good."

The rattlesnake summoned up all of his poison[11] and bit Bill viciously. Then he bit again. On the third bite, Bill flexed the muscles of his right arm, which was where the snake was biting at the time. As his huge muscles constricted under the skin, the snake writhed in pain, for the violent and powerful movement of the muscles cracked the fangs which were embedded in his arm.

"From now on," said Bill softly, "it's a fair fight, an' anythin' goes."

With that, he spat squarely in the snake's face.[12] It should be said that Pecos Bill rarely spit, and never did so in the grass country or where there was any sort of vegetation. To have done so would have been to court destruction of the country by fire. Whenever Pecos Bill spit, a bright, intense blue-white fire[13] burned for two minutes. Most rattlers crawled out of the way at his approach, for his bite was poison.

The snake was quirming with pain. He began to tremble with fear and started to lose his enthusiasm for the fight. As a preliminary for what was sure to come, Bill jerked all of the whiskers out of the reptile's chin. From that time to the present day, snakes have had no chin whiskers.

"When yeh had ernuf," said Bill smiling, "yell 'uncle'". He reached for the reptile's neck.

He no sooner got his powerful fingers around the rattler's neck, when with a rasping gasp, the snake whispered, "Uncle-uncle." 14

The snake had been assailed by fear[14] in the few short moments which had elapsed during the conflict. That fear was followed by an even more overwhelming emotion. Awe and respect filled the rattler to overflowing. He had never been so completely beaten[15] before. He had never seen a light end so quickly, and he was an expert on quick fights. He had never seen such daring. He had never even imagined that so much bravery, sportsmanship and ability could be embodied in one man. 15

Exp. Group 2 - Pecos Bill

(E2) - "The Birth of the Hero"

Bill's surname is not known. In those days if a person didn't say what his name was, no one asked him. Socially, it was not proper to inquire about names. It was not healthy either. Bill's paw never said what his name was nor where he came from, so no one ever knew. Almost everyone called him the ole man. They called Bill's maw[1] the ole woman.

The day they crossed the Sabine River[2] on one of their many moves, Pecos Bill was born.[3] When they made the crossing, it was raining[4] so hard you couldn't see the tails of the oxen from the wagon. The ole man was on foot as they started up the slope on the west side of the river. He was using a strip of buckskin for a chain. He got the oxen to the top of the hill before he saw the wet buckskin was stretched and the wagon was still at the bottom. Then it stopped raining and the sun came out.[5] It got so hot one of the oxen died of sunstroke. The ole man decided to make the best of a bad situation so he unyoked the oxen and started to skin the dead ox. Fortunately he threw the yoke over a stump. By the time he had had finished, the sun dried the buckskin out and it shrank back to its normal size and pulled the wagon up to the top of the hill.

Just as the rig reached the hilltop, a norther came down on them and it started to get cold.[6] The other ox froze to death. With both oxen[7] gone, they decided to stay and make a crop. It had been an eventful day,[8] but the greatest event of all was yet to come. That evening Pecos Bill[9] was born.

Control Groups 1 and 2

(C1) & (C2) - Ogden Nash Poems

Poem 1

Who is the happy husband?[1] Why, indeed
'Tis he who's useless in the time of need;
Who, asked to unclasp a bracelet[2] or a necklace,
Contrives to be utterly futile, fumbling, feckless,
Or when a zipper nips his loved one's back
Cannot restore the zipper[3] to its track.
Another time, not wishing to be flayed,
She will not use him as a lady's maid.

Stove-wise he's the perpetual backward learner
Who can't turn or or off the proper burner.[4]
If faced with washing up he never gripes,
But simply drops more dishes[5] than he wipes.
She finds his absence preferable to his aid,
And thus all mean time chores doth he evade.

He can, attempting to replace a fuse,
Black out the coast from Boston to Newport News.
Or, hanging pictures[6] be the rookie wizard
Who fills the parlor with a plaster blizzard.[7]
He'll not again be called to competition
With decorator or with electrician.

At last it dawns upon his patient spouse
He's better at his desk[8] than round the house.[9]

Control Groups 1 and 2

(C1) & (C2) - Ogden Nash Poems

Poem 2

My story begins in the town of Cambridge, Mass., 1
Home of the Harvard Business and Dental Schools,
And more or less the home of Harvard College.
Now, Harvard is a cultural institution,
Squandering many a dollar upon professors, 2
As a glance at a Harvard football team makes obvious;
Professors wise and prowling in search of wisdom,
And every mother's son of them absent-minded. 3
But the absentest mind belonged to Professor Primrose.[1]
He had won a Nobel award and a Pulitzer Prize,
A Guggenheim and a leg on the Davis Cup, 4
But he couldn't remember to shave both sides of his face.
He discharged the dog[2] and took the cook for an airing;
He frequently lit his hair and combed his cigar;
He set a trap for the baby[3] and dandled the mice; 5
He wound up his key[4] and opened the door[5] with his watch;
He tipped his students and flunked the traffic policeman;
He fed mosquitoes crumbs and slapped at the robins; 6
He always said his prayers when he entered the theater,[6]
And left the church[7] for a smoke between the acts;
He mixed the exterminator man a cocktail 7
And told his guests to go way, he had no bugs;
He rode the streets on a bicycle[8] built for two,
And he never discovered he wasn't teaching at Yale. 8
At last one summer he kissed his crimson flannels
And packed his wife[9] in camphor, and she complained.
She had always hated camphor, and she complained.
"My dear," she ordered, "these contretemps must cease; 9
You must bring this absent mind a little bit nearer;
You must tidy up that disorderly cerebellum;

You must write today and enroll in the Pelman Institute." 10
He embraced his pen[10] and he took his wife in hand,
He wrinkled a stamp and thoughtfully licked his brow,
He wrote the letter[11] and mailed it, and what do you know?
In a couple of days he disappeared from Cambridge. 11
"For heaven's sake, my husband has disappeared,"
Said Mrs. Primrose. "Now isn't that just like him?"
And she cut the meat[12] and grocery orders in half,
And moved the chairs in the living room around, 12
And settled down to a little solid comfort.
She had a marvelous time for seven years,
At the end of which she took a train[13] to Chicago.
She liked to go to Chicago once in a while 13
Because of a sister-in-law who lived in Cambridge.
Her eye was caught at Schenectady by the porter;
She noticed that he was brushing off a dime,[14]
And trying to put the passenger in his pocket. 14
"Porter,[15] she said, "aren't you Professor Primrose?
Aren't you my husband, the missing Professor Primrose?
And what did you learn at the Pelman Institute?"
"Good Lord, Maria," the porter said, "good Lord! 15
Did you say Pelman? I wrote to the Pullman folks!"

APPENDIX E

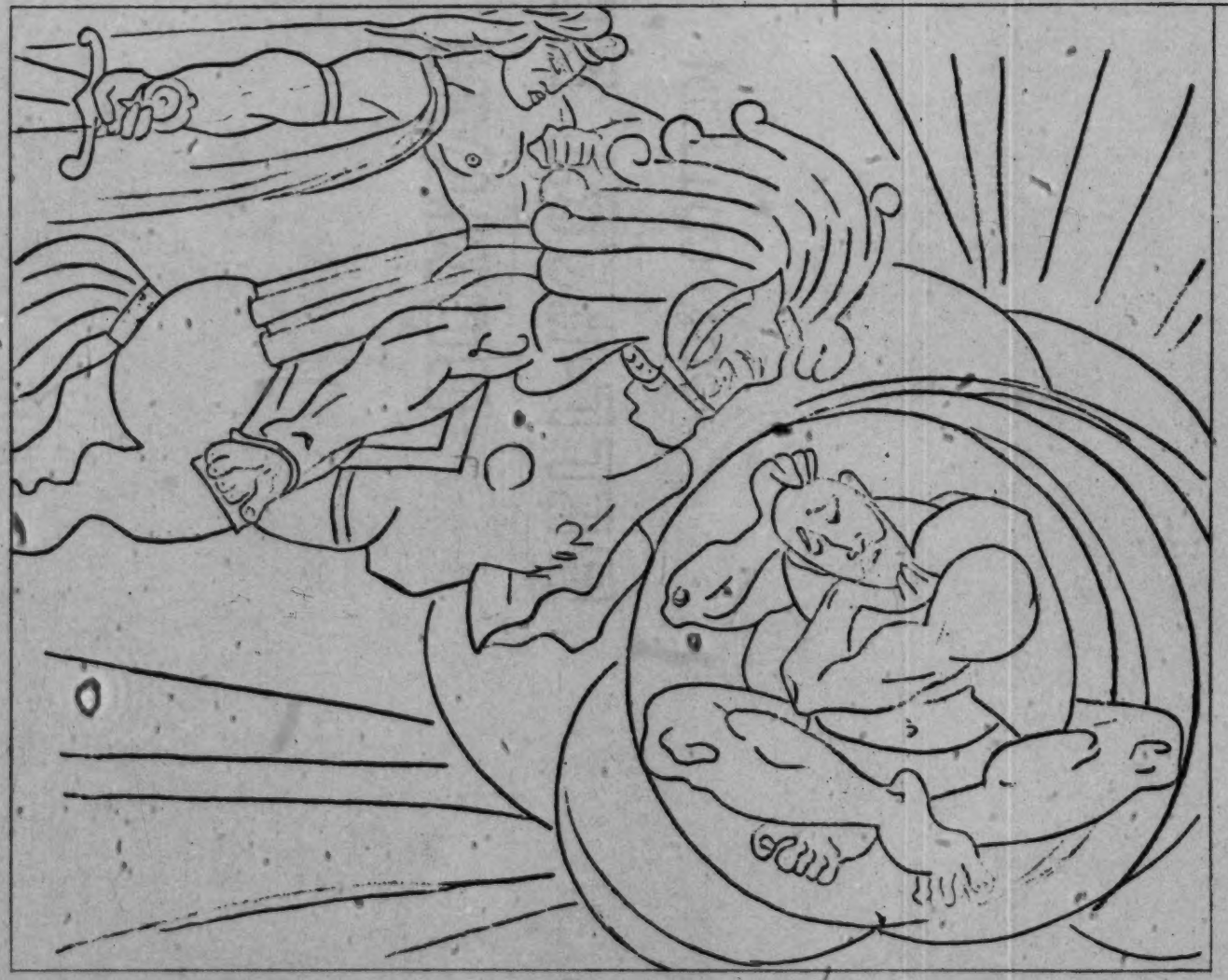
Story Illustrations

1. David of Sassoon - "The Birth of a Hero"

APPENDIX E

Story Illustrations

1. David of Sassoon - "The Conquering Hero"



APPENDIX E

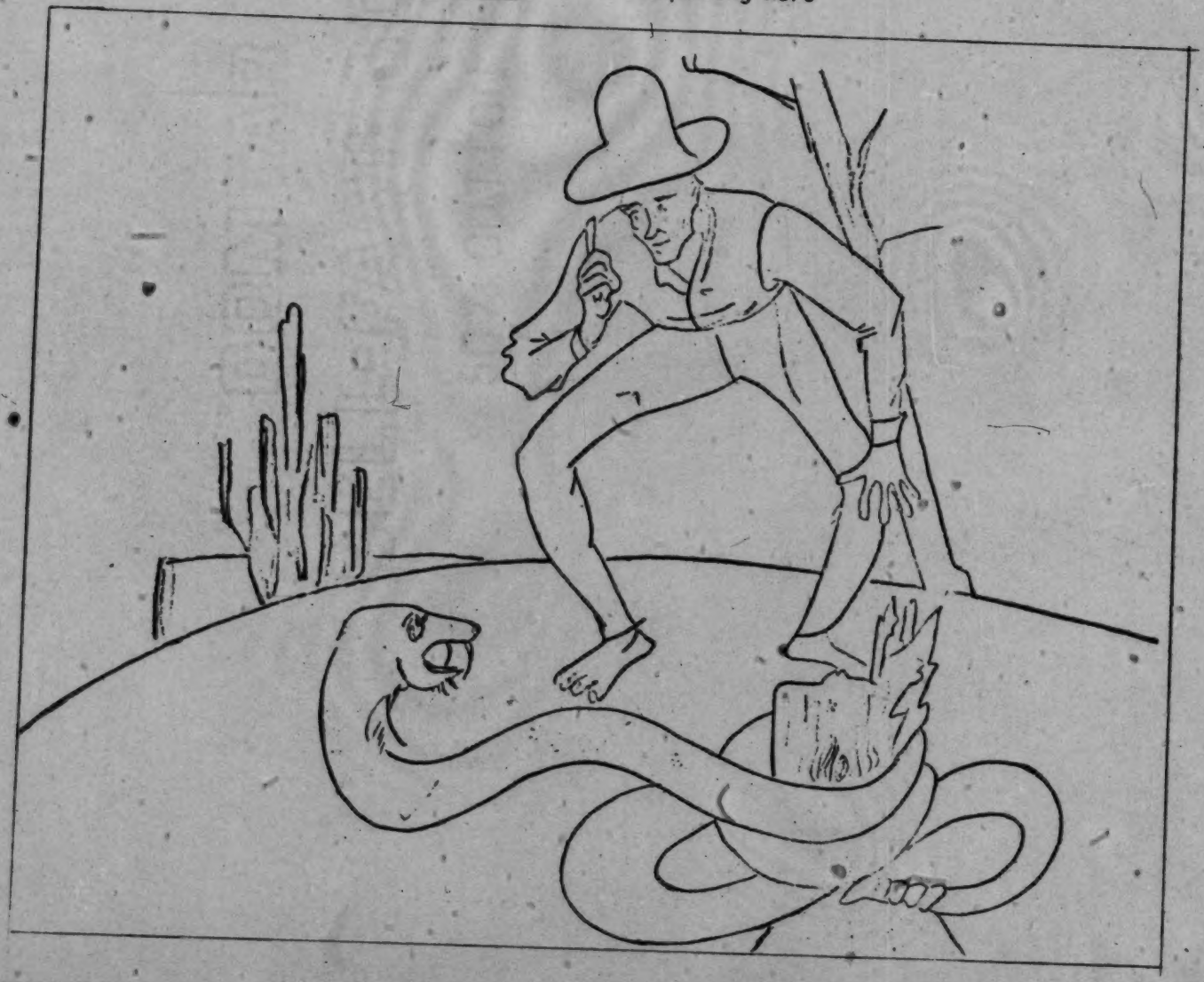
Story Illustrations

2. Pecos Bill - "The Birth of a Hero"

APPENDIX E

Story Illustrations

2. Pecos Bill - "The Conquering Hero"



APPENDIX E

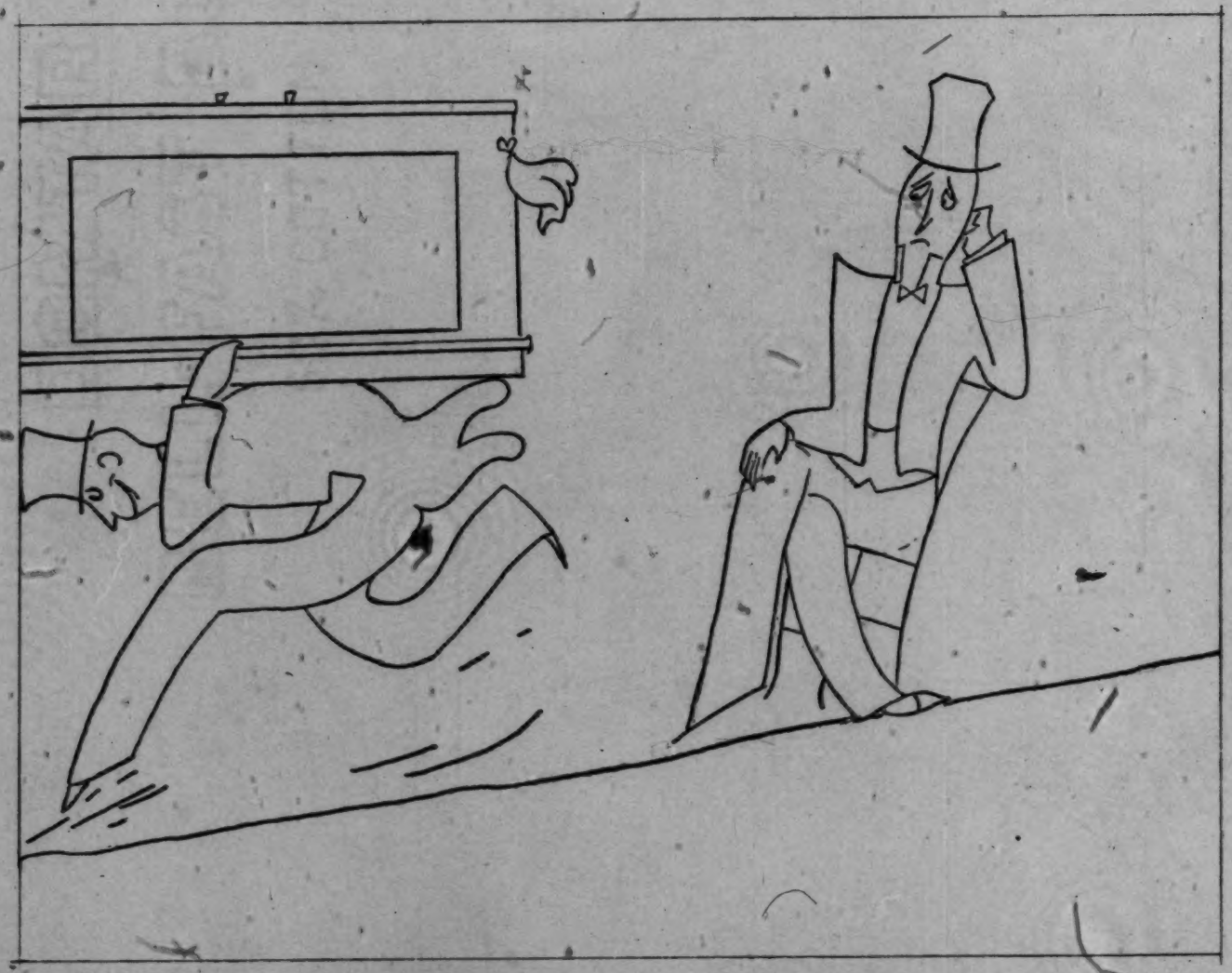
Story Illustrations

3. Odgen Nash Poems - Poem 1

APPENDIX E

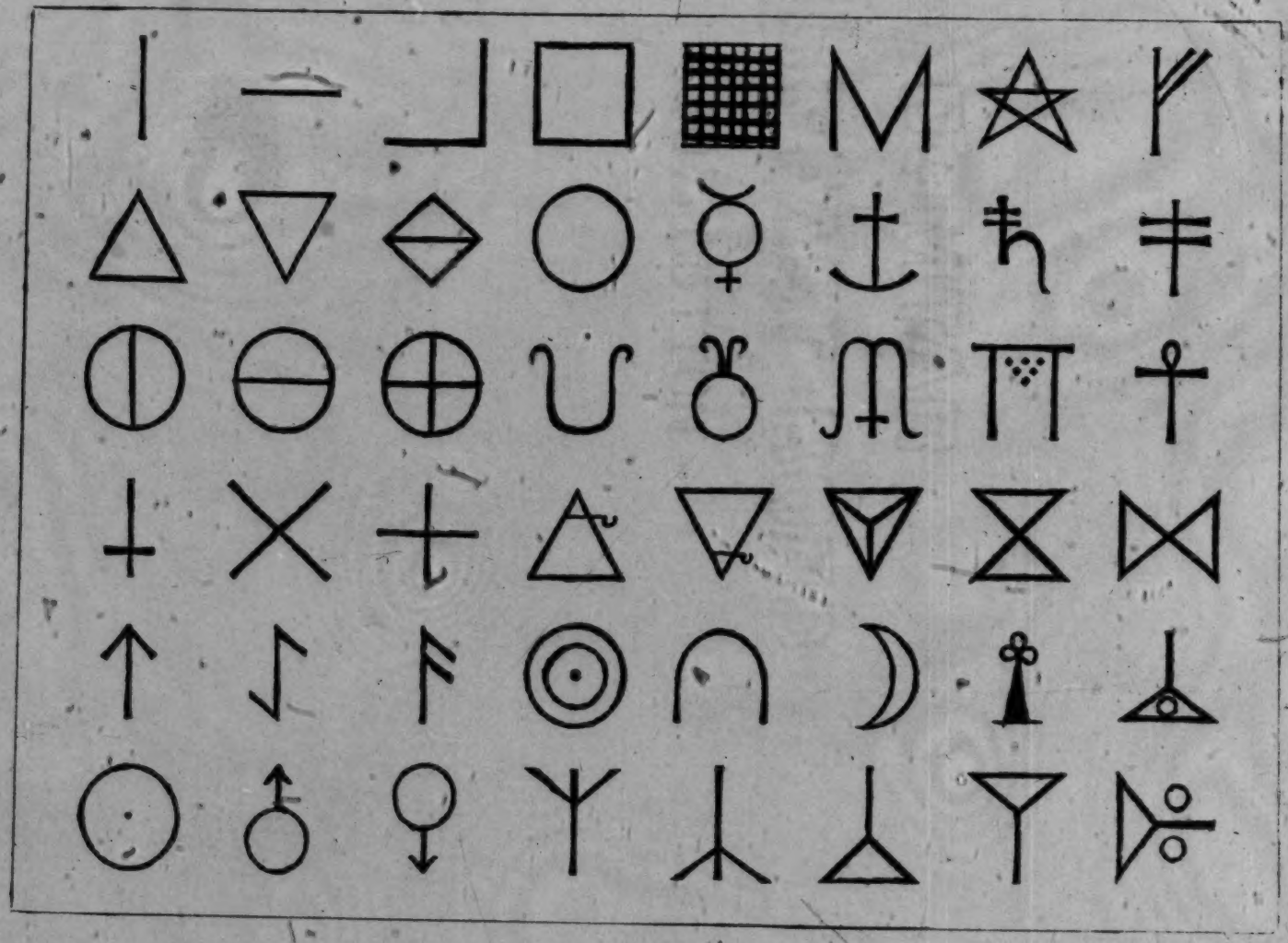
Story Illustrations

3. Odgen Nash Poems - Poem 2



APPENDIX F

Association Stimuli 1. Map of Symbols



APPENDIX F

Association Stimuli

2. Lists of Chinese Characters

a) 拉鏈	b) 手鐲	c) 圖畫
d) 暴風	e) 屋	f) 爐子
g) 桌	h) 丈夫	i) 碟

a) 挑夫	b) 火車	c) 嬰兒	d) 狗	e) 戲院
f) 聖堂	g) 鑰匙	h) 筆	i) 妻子	j) 一毫
k) 肉	l) 單車	m) 信	n) 教授	o) 門

APPENDIX G

Response Materials (Type 1)

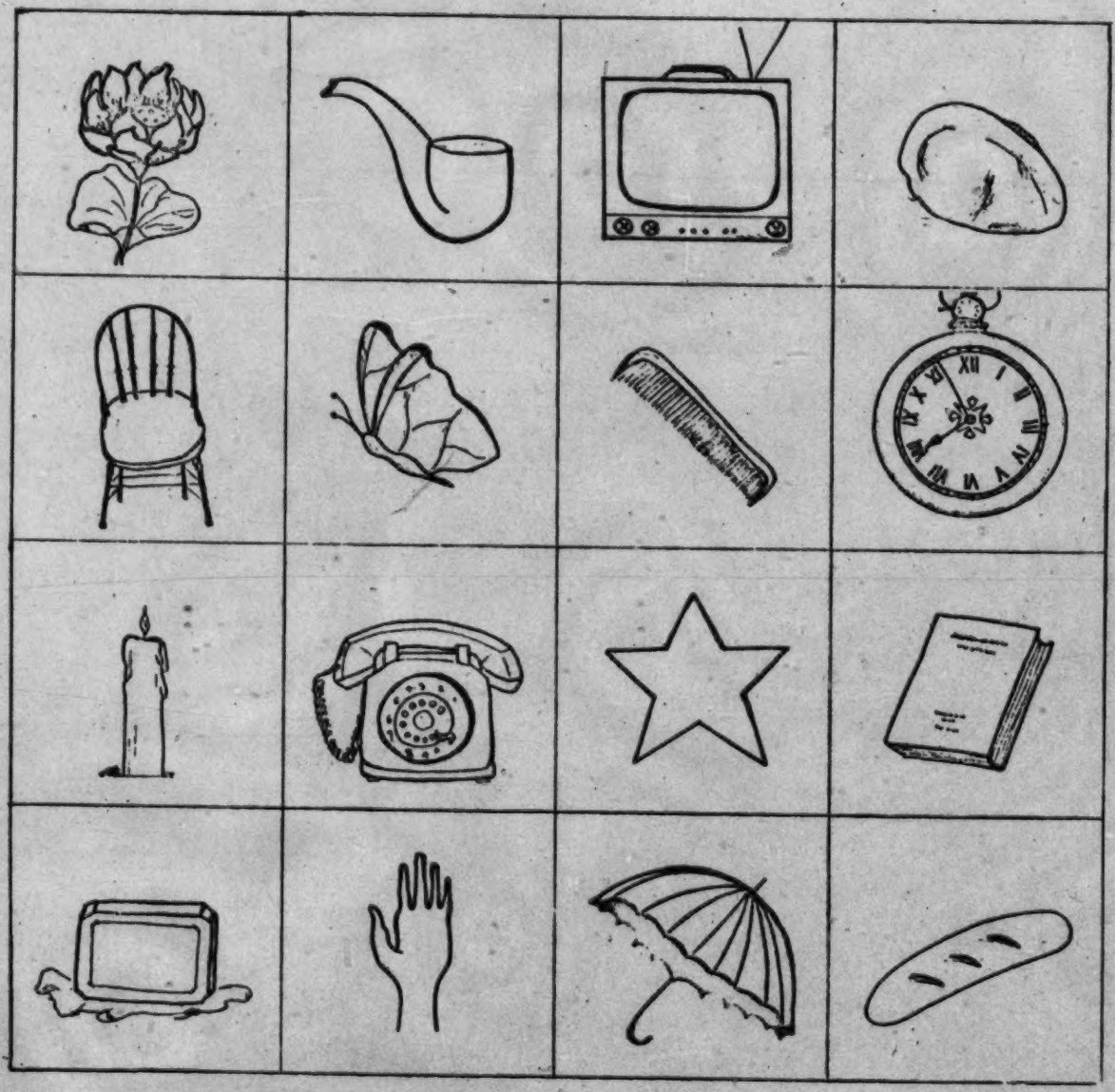
Tachistoscope Test

EARTH	MONTH
CASTLE	TABLE
QUEEN	DRESS
HEAVEN	RECENT
SPIRIT	PROFIT

APPENDIX G

Response Materials (Type 2)

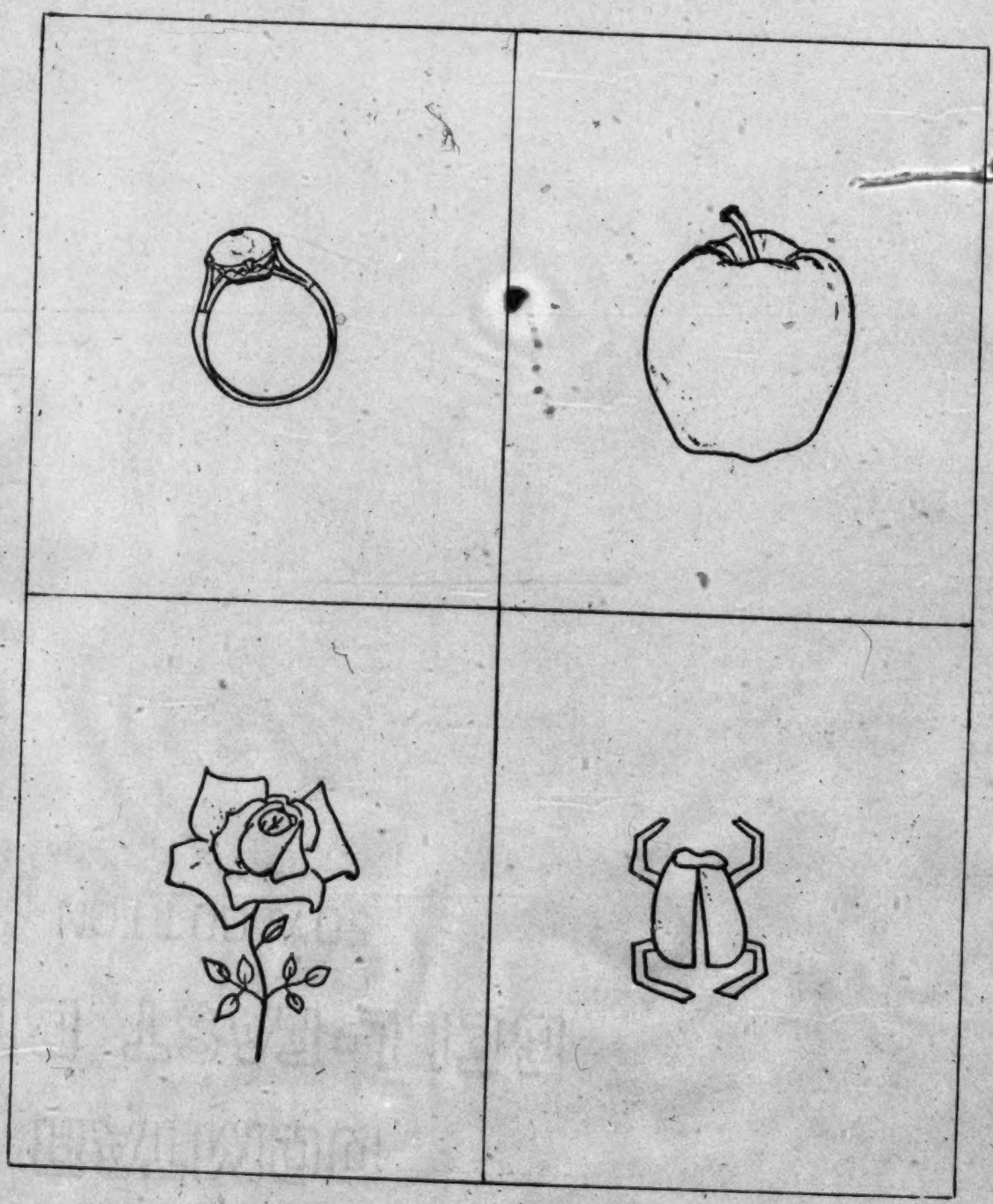
Detection Test



APPENDIX G

Response Materials (Type 3)

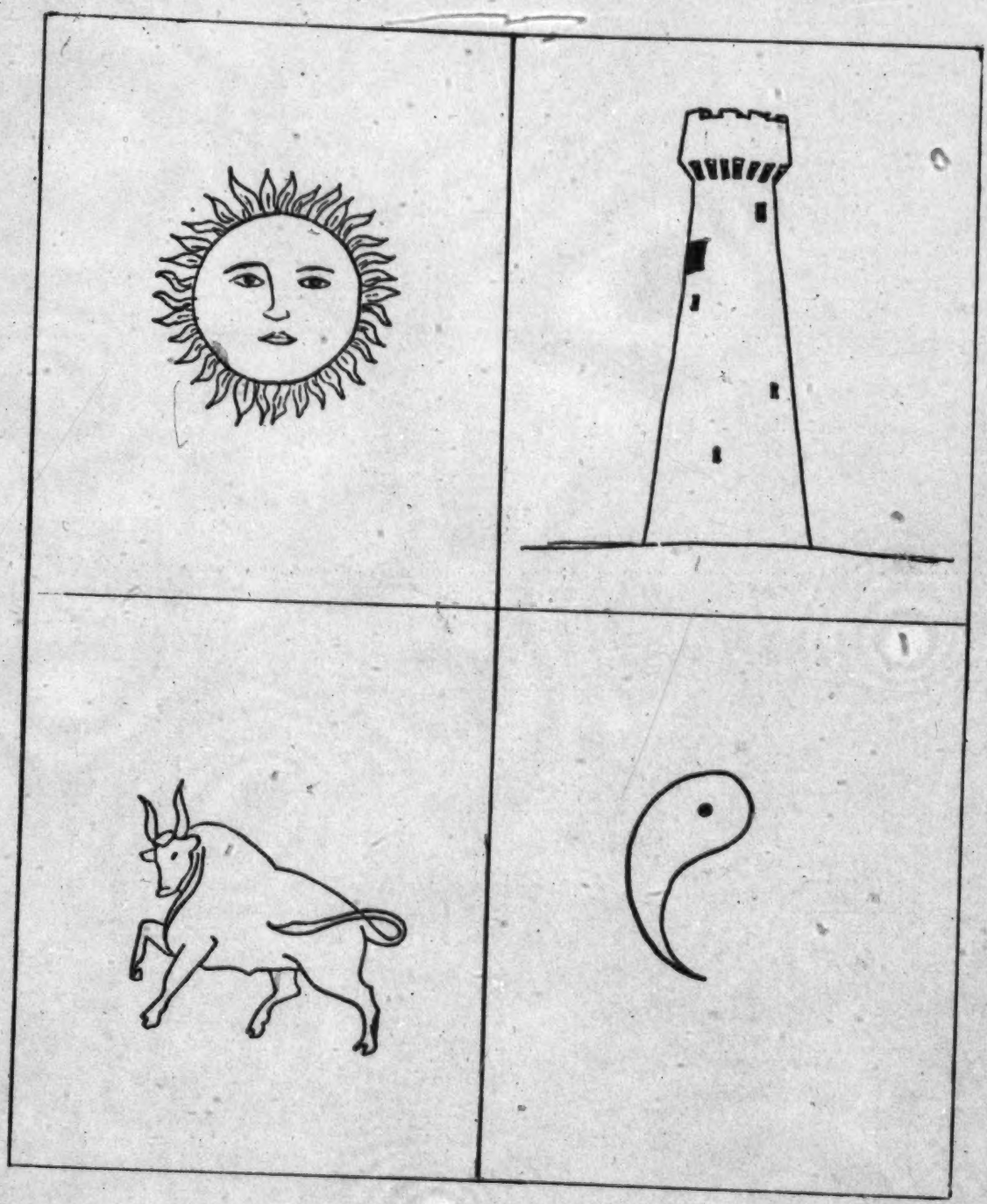
Sorting Test - (a) "Self"



APPENDIX G

Response Materials (Type 3)

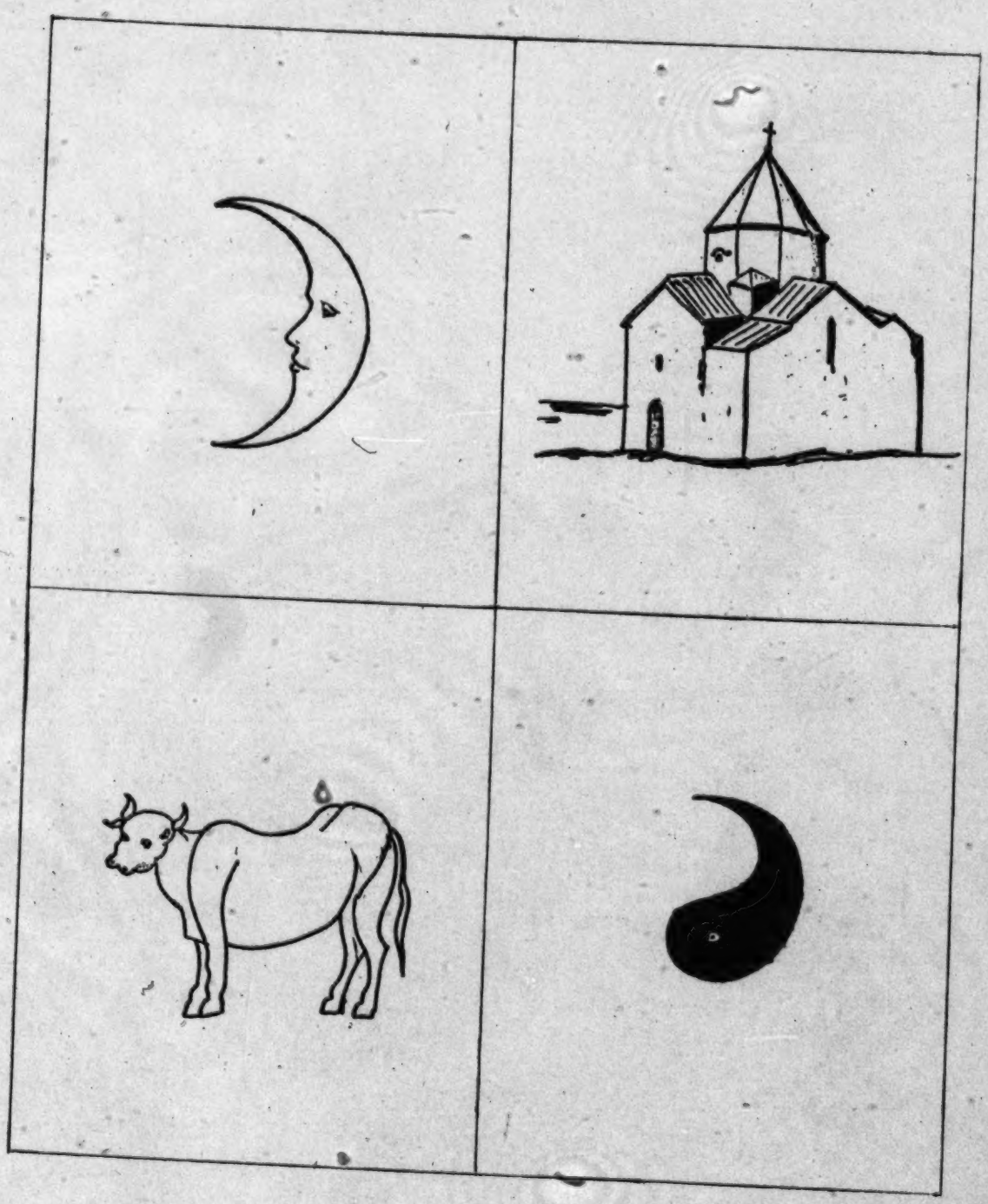
Sorting Test - (b) "Spirit"



APPENDIX G

Response Materials (Type 3)

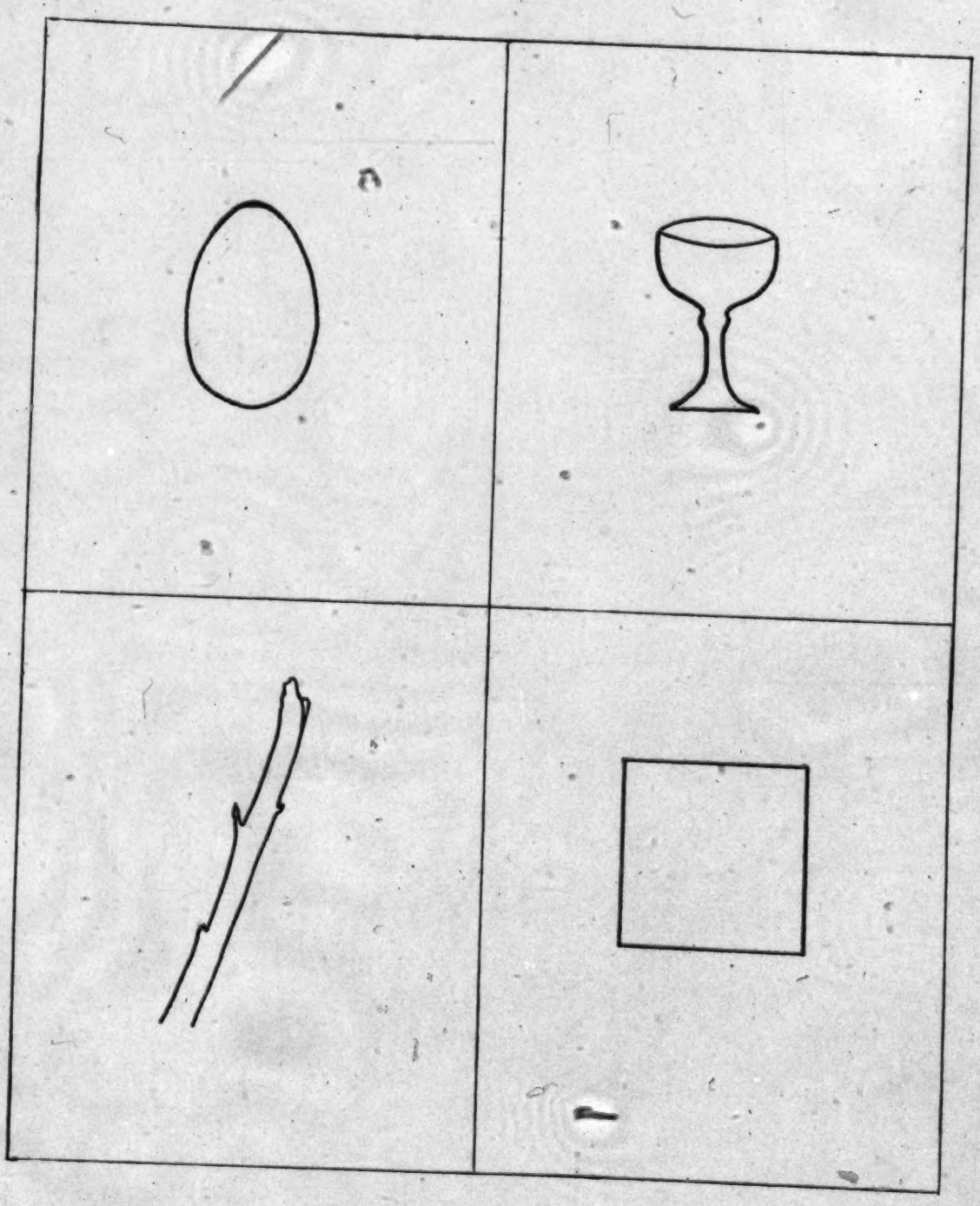
Sorting Test - (c) "Mother"



APPENDIX G

Response Materials (Type 3)

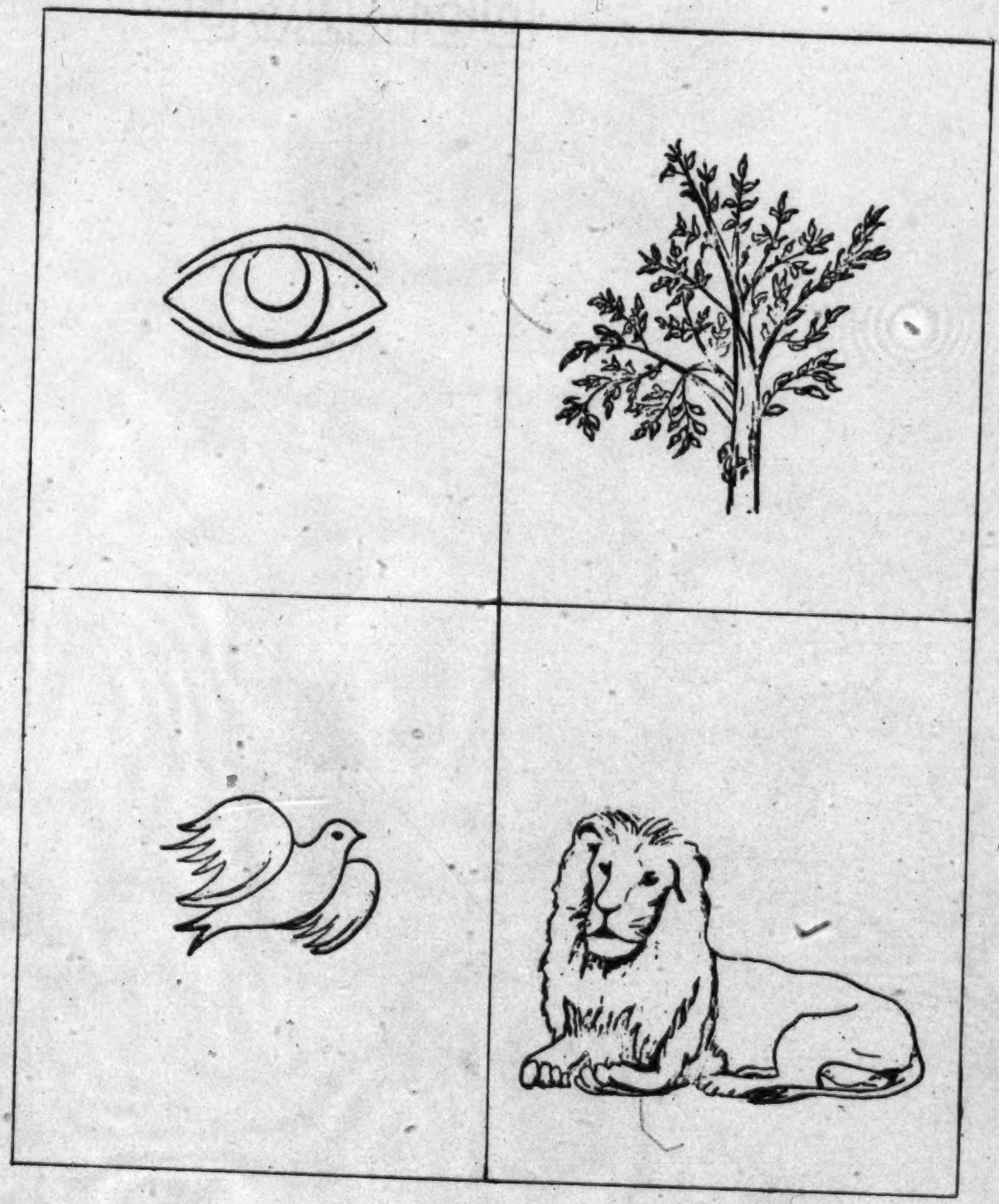
Drawing Completion Test



APPENDIX G

Response Materials (Type 3)

Drawing Association Test



APPENDIX H

Analysis of Variance of the Detection Test

Source	df	MS	F
Methods	4	0.67	0.57
S(M)	64	1.16	-
Responses	1	13.78	9.18*
M x R	4	0.19	0.12
S(M) x R	64	1.50	-

* $p < .01$

Analysis of Variance of the Tachistoscope Test

Source	df	MS	F
Methods	4	0.68	.99
S(M)	65	0.69	-
Responses	1	.05	.45
M x R	4	.22	2.0
S(M) x R	65	.11	-

APPENDIX I

Conceptual Categories

1. Sorting Test

concrete: when pictures are said to belong together because of a concrete attribute.

function: when pictures are sorted together because of a "function they have in common or because of a common function performed with or on them by human beings."

abstract-conceptual: when the common context is explained in generic form.

syncretistic definitions: when the sorting was based on a vague and generalized attribute.

symbolic definitions: when the symbolic meaning of the pictures was the basis of sorting.

Conceptual Categories

2. Drawing Completion Test

CUP:
1 - completed as a glass or a drink
2 - completed as a chalice or a goblet
3 - completed with any symbolic connotations of a cup or a drink

EGG:
1 - completed as just an egg with a crack or with an Easter decoration on it.
2 - completed as a person's face or body
3 - completed with symbolic reference of life and birth

ROD:
1 - completed as a tree or a branch
2 - completed as spring
3 - completed with any other creative completion

SQUARE:
1 - completed as a cube (a geometric form)
2 - completed as a frame, a window, or a house
3 - completed with abstract themes

Conceptual Categories

3. Drawing Association Test

EYE (S)
1 - another eye or other parts of the face or also eyeglasses, and puns of "eye" or "see"
2 - camera or telescope
3 - references to insight and knowing

EYE (O)
1 - any other parts of face or body, and any opposite puns to "eye" or "see"
2 - references of blindness
3 - references of darkness,
- references of not knowing, ignorance

TREE (S)
1 - another tree or any other kind of plant
2 - references to springtime or natural environment
3 - references of growth,
- references of life

TREE (O)
1 - any other living thing
2 - references of fall, winter
3 - references of inanimate objects,
- references of death

BIRD (S)
1 - other birds or any other animal
2 - airplanes
3 - references of freedom,
- references of peace

BIRD (O)
1 - any prey, predator, or opposite species of a bird
2 - opposite references of flight - earthbound or inanimate
3 - references of prison,
- references of war

LION (S)
1 - another lion or animal of the same family
2 - references of physical characteristics of the lion - strength, courage
3 - references of kingly qualities

LION (O)
1 - another animal or plant
2 - references of weak or tamed qualities - cowardice, meekness
3 - references of poverty or non-leadership

APPENDIX J

Test Responses

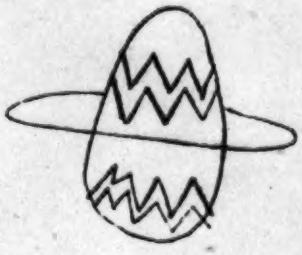
1. Drawing Completion Test - (a) Cup

APPENDIX J

Test Responses

1. Drawing Completion Test - (b) Egg

E14



Lone Ranger

story of big story

E22

modern sun behind Burned out forest

E18

TOUGH EGG

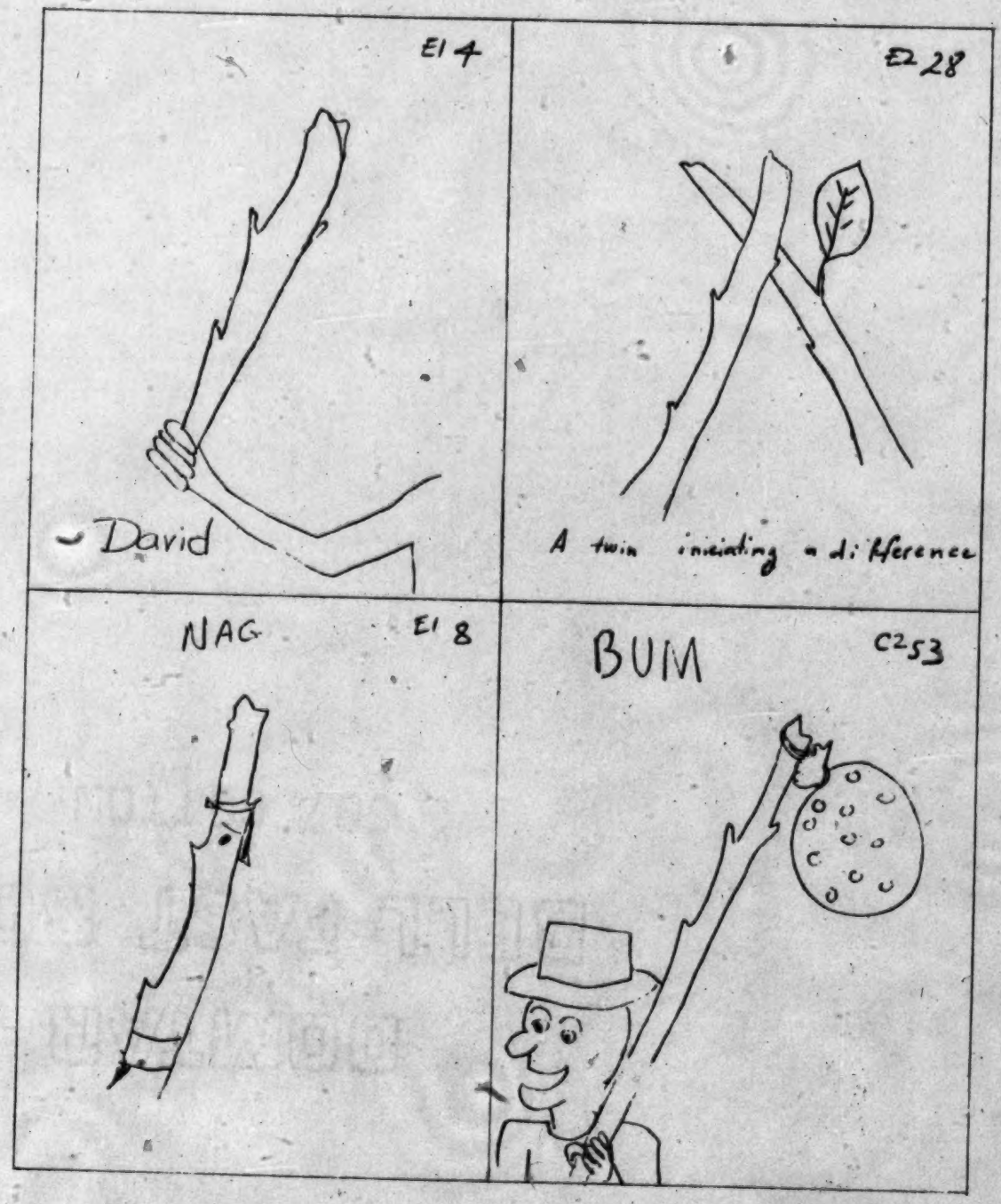
E21

Complascent Stupidity

APPENDIX J

Test Responses

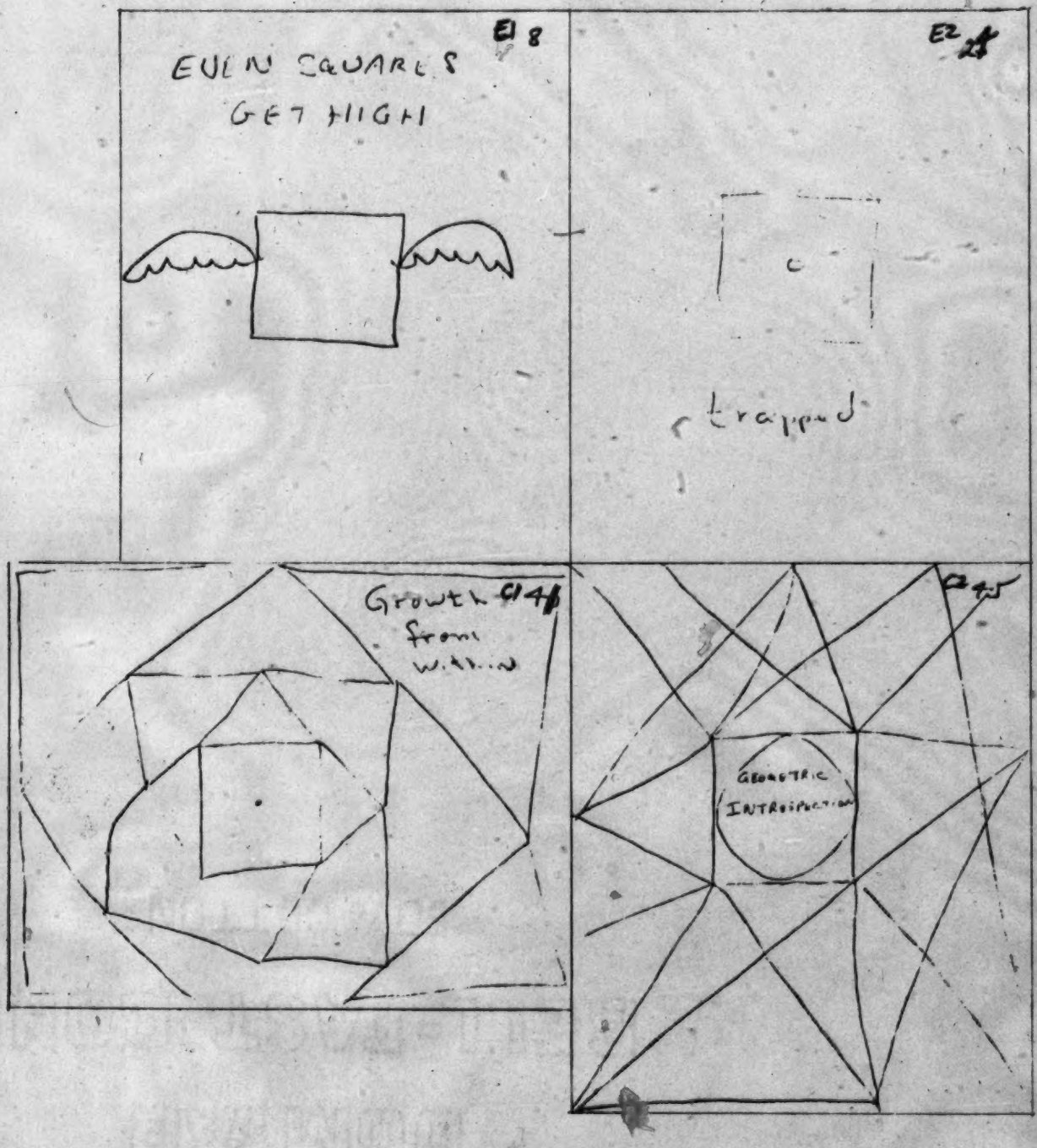
1. Drawing Completion Test - (c) Rod



APPENDIX J

Test Responses

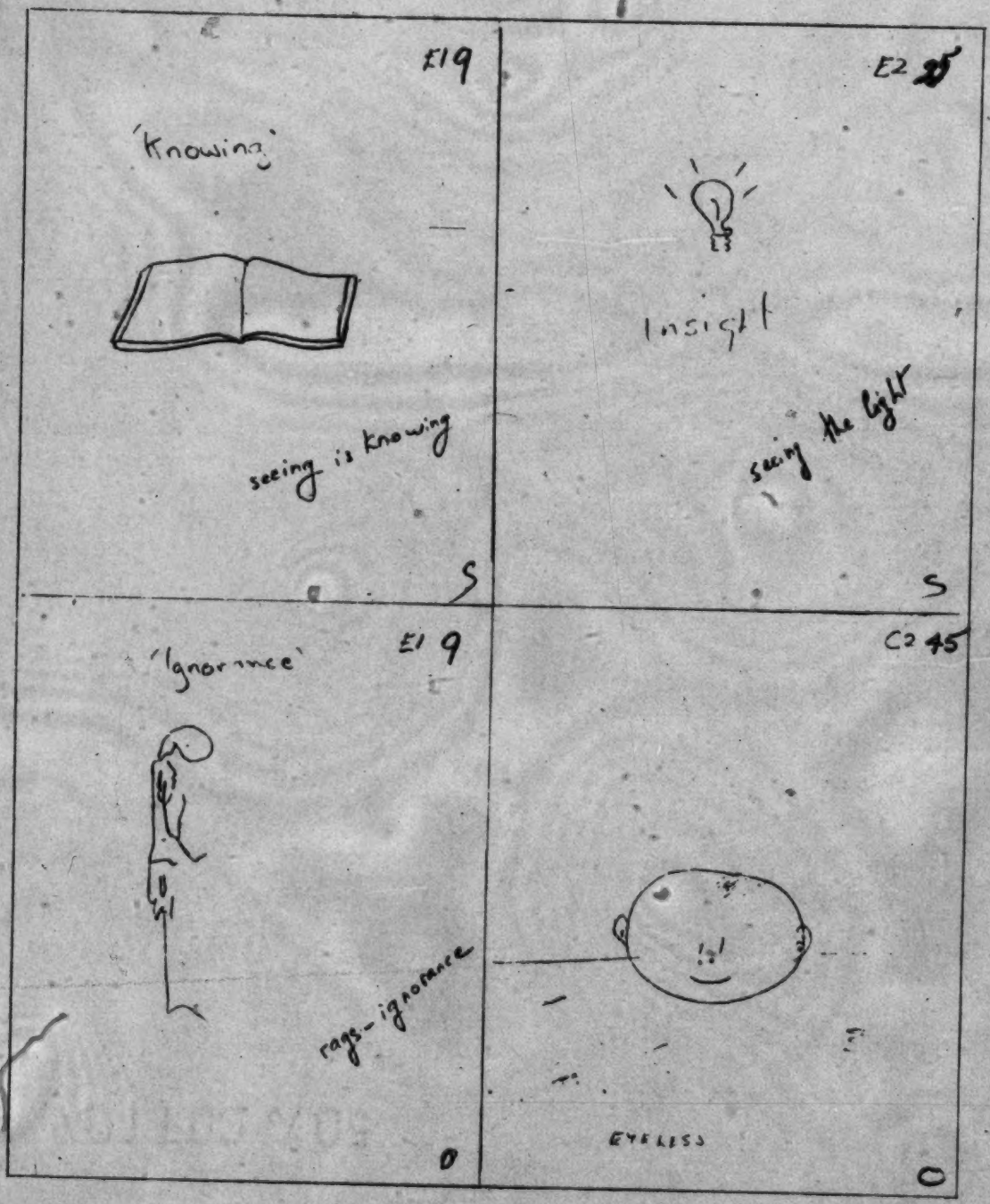
1. Drawing Completion Test - (c) Square



APPENDIX J

Test Responses

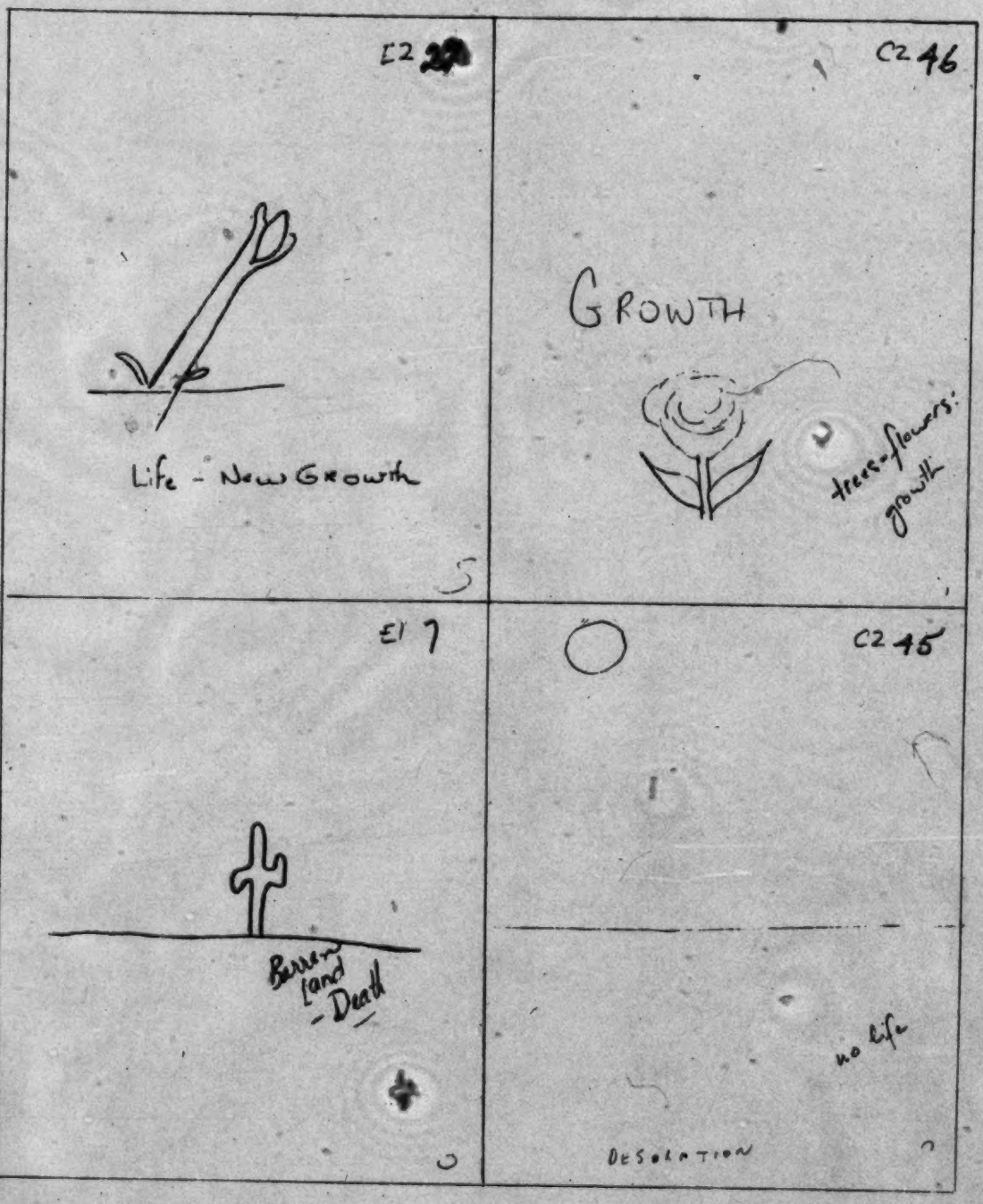
2. Drawing Association Test - (a) Eye



APPENDIX J

Test Responses

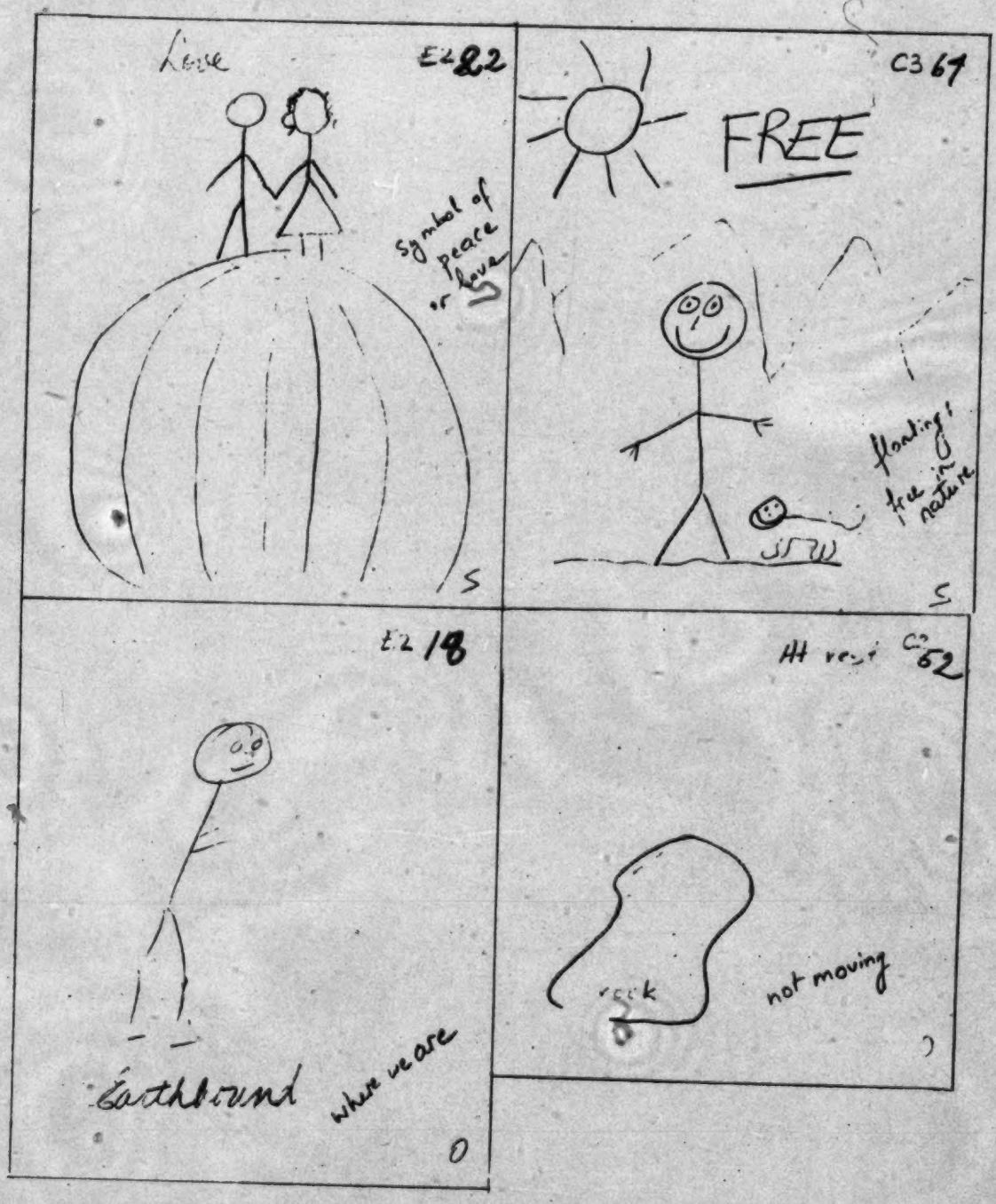
2. Drawing Association Test - (b) Tree



APPENDIX J

Test Responses

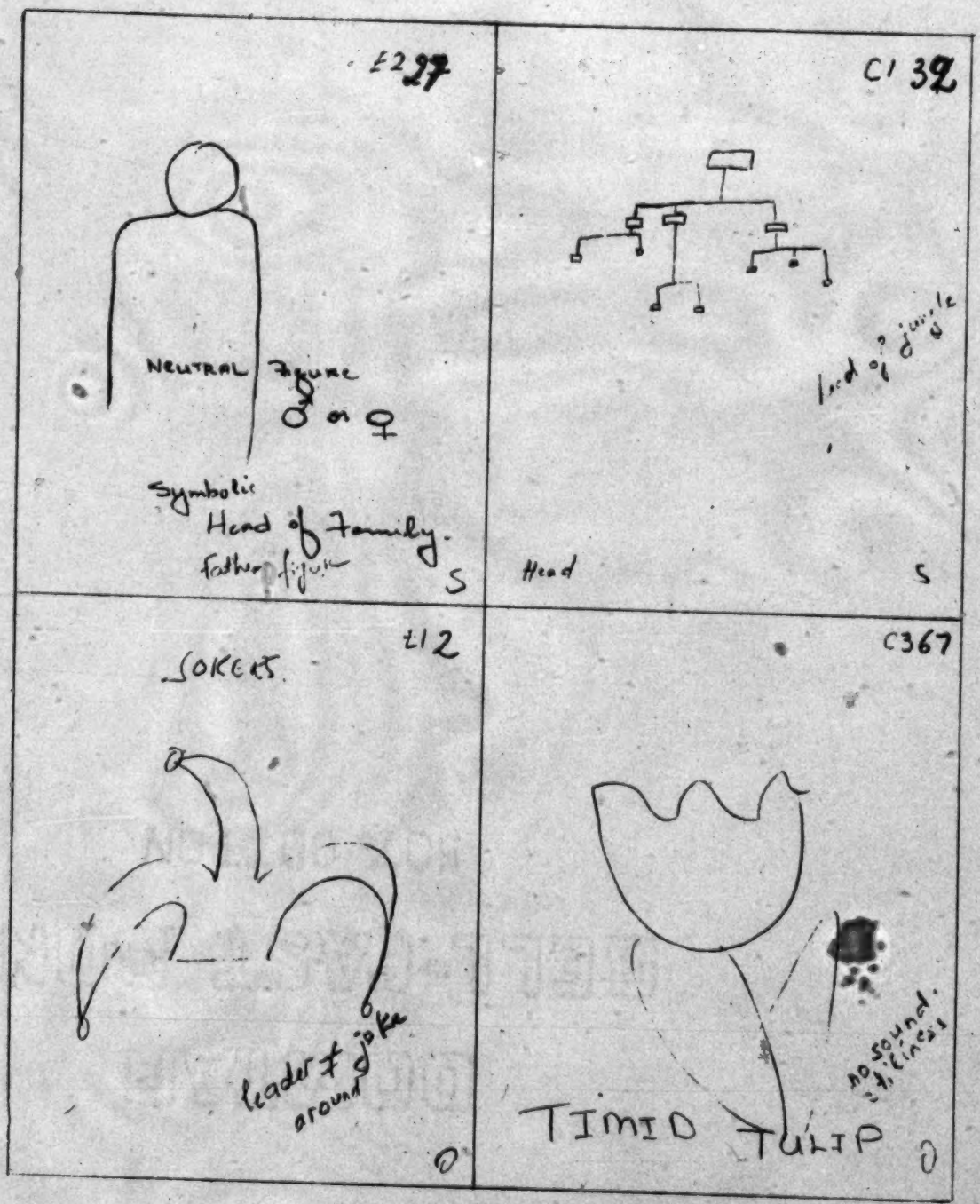
2. Drawing Association Test - (c) Bird



APPENDIX J

Test Responses

2. Drawing Association Test - (d) Lion



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